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## ABSTRACT

This volume compiles technical reports of Title I Elementary and Secondary Education Act project evaluations conducted during the 1976-77 academic year in the school district of Philadelphia, Pennsylvania. The reports include rationale, expected outcomes, mode of operation, previous evaluative findings, current implementation, and attainment of objectives for each project. A series of comprehensive mathematics projects encompassed educable retarded and Title I students in grades 2-12, and focused on remedial assistance in computational skills through classroom, tutorial, and individualized instruction. Included was a project to reduce mathematics skill deficiencies in grades 2-6 by providing the schools with mathematics resource teachers. A series of comprehensive reading projects provided similar remedial instruction. Other projects involved intensive reading; bilingual education, counseling, computer-assisted instruction, skill and learning centers, a multimedia center, and neglected and delinquent children. Also evaluated were a project to provide high school students with cultural and curriculum enrichment to motivate them to seek post secondary education, and a project employing local residents as school-community coordinators. Summer components of Title I projects are also examined. Favorable learning environments, reversal of some student underachievement trends, and increased parental participation are attributed to Philadelphia's Title I projects. (Author/JAC)

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## 1976-1977

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**RESEARCH  
AND EVALUATION**  
OFFICE OF  
THE SCHOOL DISTRICT OF PHILADELPHIA



Report #77140

EVALUATION OF TITLE I ESEA  
PROJECTS, 1976-1977:  
Technical Reports

An annual report issued by the Department of Federal Evaluation Resource Services, evaluating projects funded under Title I of the federal Elementary and Secondary Education Act. (Abstracts of these technical reports comprise Report #77139.)

November 1977

Office of Research and Evaluation  
THE SCHOOL DISTRICT OF PHILADELPHIA  
Philadelphia, Pennsylvania 19103

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Dr. Stephen H. Davidoff, Assistant Director  
Federal Evaluation Resource Services

This report was prepared by the Department of Federal Evaluation Resource Services. Assistance in evaluation design, instrument development, data analysis, and editorial matters was provided by the Division of Instructional Research and Development Services, Dr. Edward K. Brown, Director. Members of the project-evaluation teams are named in the Appendix.

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## PREFACE

This volume contains the technical reports of individual Title I project evaluations conducted during the 1976-1977 school year. It contains extensive information about each project's rationale, expected outcomes, mode of operation, previous evaluative findings, current implementation, and attainment of its objectives. In addition, the reader will be able to gain insight into the extensive evaluation activities that are intimately linked to each project.

Comprehensive evaluations have revealed that over the past 12 years Philadelphia's Title I projects have enabled administrators and teachers to create favorable learning environments, have reversed some of the historic trends toward drastic pupil underachievement, and have increased parental participation.

Evaluations required under Title I have given administrators an opportunity to discover and choose among alternative methods of improving instruction. It is hoped that the knowledge gained by systematic evaluation will be used to continuously upgrade the quality of services provided to target-area children.

Stephen H. Davidoff

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\*Separate technical reports on Alternative Programs and on each of the District Reading Projects are issued annually by the Office of Research and Evaluation's Department of Priority Operations Evaluation Services. Although these projects are not treated in the Title I Technical Reports, they are included in the briefer volume of Title I Abstracts.



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## AFFECTIVE EDUCATION

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

The Affective Education project (AEP) has three major areas of emphasis: (1) to improve the acquisition of basic academic skills; (2) to teach teachers a variety of techniques and approaches that will create a more favorable learning climate; and (3) to foster greater communication and understanding between parents and their children and between parents and teachers.

The project is organized into four branches: (1) the Communications Network (CN) works with groups of teachers from several schools over a one- to three-year period. CN has developed new curricula, techniques, and approaches that integrate reading, writing, speaking, and listening; (2) the Parent Training (PT) component offers intensive training for parents from a single school over a ten-week period; (3) Resource Services (RS) offers a variety of workshops and longer-term support groups and courses for teachers, aides, and administrators in the use of affective curricula and specific affective teaching techniques; and (4) the Schools for All Ages (SFAA) functions as a developmental model for increasing the age range of student interaction by promoting cross-age and cooperative learning experiences.

### RATIONALE

AEP attempts to meet the needs of teachers, students, and parents through development of new curricula and teaching techniques, creation of more humanistic classroom climates, prevention and removal of psychological blocks to learning, improvement of self-image, and provision of a resource center, in-service courses, and teacher and parent affective training.

The specific problems or needs which affect or otherwise pertain to teachers include (a) difficulty in developing and applying curricular and teaching approaches which prevent or decrease failure patterns and blocks to the learning of communication skills, (b) an expressed sense of isolation in their work, (c) an expressed sense of frustration, (d) an expressed sense of role insecurity, (e) a loss of personal autonomy, (f) difficulty in developing life-relevant curricula and teaching techniques, and (g) a relatively high turnover rate.

The specific problems or needs which affect or pertain to students include (a) poor achievement in school subjects, especially communication skills, as indicated by scores on standardized achievement tests, (b) difficulty in relating course content to their personal lives, (c) low secondary school retention,

(d) chronic absence and lateness, (e) negative acting-out behaviors, (f) expressed feelings of a lack of identity and a lack of control over one's personal life and environment, and (g) a dislike for school.

The specific problems or needs which affect or pertain to parents include (a) expressed desire to support and augment their children's learning, especially reading, writing, listening, and speaking, (b) belief that school does not serve the real needs of their children, especially in the upper grades, and (c) expressed feelings of alienation toward "schooling".

#### EXPECTED OUTCOMES

AEP is designed to provide introductory workshops, in-service courses, and CN training programs for school personnel and parents. The development and dissemination of process-oriented curricula, and the establishment or maintenance of affective target schools or units within target schools are additional anticipated outcomes of the project.

It is anticipated that students who receive most or all of their instruction from teachers who have participated in RS or CN training sessions will maintain or improve reading, writing, speaking, and listening skills, evidence increased school attendance, acquire fewer disciplinary referrals, improve their attitudes toward school and learning, and evidence positive attitudes toward their teachers and peers.

#### PREVIOUS FINDINGS

During the project's initial years of operation (1968-1970), efforts were concentrated on the development of appropriate curricular materials and training procedures.

In the years 1970-1973, comparisons with non-AEP students suggested that affective students understood themselves better, were able to generate more solutions to problems, were able to use more explicit language in describing their feelings, and had more positive attitudes toward themselves, their teachers, and their classes. Affective students were found to attend school more frequently and to have fewer discipline referrals than a comparison group of students. Participating teachers indicated that they felt they were dealing with disciplinary matters more constructively than before their participation.

Students reported that they felt they had improved in academic achievement. This was substantiated in 1972-1973 when affective students in the middle school showed significantly greater improvement in reading achievement than non-AEP students.

In 1973-1974, affective students did as well as or significantly better than non-affective students in reading comprehension and vocabulary on the California Achievement Tests (CAT). On a semantic differential survey, high school affective students attained significantly higher scores than comparison students regarding their attitudes toward school.

Affective students attended school significantly more often than comparison students at the secondary and intermediate levels, but not at the elementary level. Affective students had significantly fewer disciplinary referrals than comparison students. At the elementary level, 83% of the affective students gained one or more reading-book levels as measured by an informal reading inventory (IRI); 61% gained two or more book levels.

In 1974-1975 the project continued to meet the needs of teachers, students, and parents through programs provided by its RS and CN components. Specifically, it was successful in developing new curricula, disseminating information, providing in-service courses, maintaining a resource center, conducting short-term teacher and parent training, encouraging the frequent use of affective teaching techniques, delivering CN training, resources, and follow-up, improving reading levels of third-, fourth-, and fifth-grade students, and improving reading comprehension at the secondary level. The project had partial success at the secondary level pertaining to student attendance, student attitude toward school, student discipline, and students' ratings of teachers.

In 1975-1976, pupils in classrooms of teachers trained by AEP achieved significantly higher reading achievement scores (vocabulary and comprehension) than a comparison group of nonproject pupils; exhibited a significantly greater willingness to write and generally wrote more competent stories than a comparison group of non-project pupils; and tended to persist in reading during a sustained silent reading period for a significantly greater porportion of time than non-project pupils.

#### EVALUATION OF THE CURRENT YEAR

The current year's evaluation of AEP focused on (1) changes in the reading comprehension skills of project students, (2) changes in affective learning factors which directly contribute to reading and general academic performance, and (3) the provision of appropriate training experiences for School District personnel and parents.

#### IMPLEMENTATION

During the 1976-1977 school year, the project's intended mode of operation was fully implemented. The four branches of the project, Communications Network,



Parent Training, Resource Services, and the School for All Ages provided training and support services throughout the School District.

The Communications Network (CN) division worked with teachers to create the conditions in the classroom and in the home that allow children to develop histories of success in learning, positive associations with reading, writing, listening, and speaking, and thought patterns and habits that support reading achievement. During the current school year, this division conducted 72 hours of workshops for 37 first-year participants, 78 hours for 20 second-year participants, and 19 hours for 15 third-year participants. Each month throughout the school year, the first- and second-year groups convened for one whole-day workshop and for one after-school meeting. Intensive classroom follow-up for all participants was an integral part of the training experience. In January 1977, the Communications Network was awarded validation by the Pennsylvania Diffusion Panel for their work with teacher expectations as "an exemplary program which has evidence of effectiveness and which is recommended to others for adoption or adaptation."

The Parent Training (PT) division conducted long-term intensive training for parents from a single school during a ten-week schedule of weekly sessions. A total of 95 parents from five schools participated in these experiences. In addition, short-term training for parents was also provided. A total of 700 parents from 29 schools participated in one to seven sessions each. The topics covered in all parent training sessions included active listening, conflict resolution, family scripting, I-message, communication skills, and discipline versus punishment. Written evaluations and formal interviews were conducted by the evaluation team at the conclusion of two long-term sessions. The results of these evaluations indicated that (a) participants' reactions were highly favorable, (b) participants had gained additional knowledge, and (c) participants had successfully implemented new parental practices at home.

The Resource Services division sponsored general training and information sharing to assist educators in their efforts to improve students' motivation for learning and to facilitate students' acquisition of basic skills. Areas of emphasis during the current school year included classroom limits and boundaries, test-taking skills, expectations, cooperation versus competition, affective teaching techniques, and self-concept. The division conducted workshops for 2,100 teachers (1,130 attending more than one workshop), 40 classroom aides, 220 principals, 75 supervisors, and 60 counselors. Direct services were provided to 50 Title I schools. In addition, long-term services were provided at three schools where monthly sessions for the total of 47 teachers covered such topics as self-esteem, expectations, limits and boundaries, helping relationships, and shared responsibility. Project staff distributed and collected general evaluation questionnaires at many of their scheduled training sessions. The information included in these forms was used to improve future sessions dealing with the same or similar content.



The School for All Ages (SFAA) division sponsored two special schools within the Philadelphia school system. The schools promoted three goals: age integration; development of cooperative learning settings; and appropriate uses of the cooperative, competitive, individualistic, and dependent styles of learning. This division conducted continuous staff development for the faculty of each school. The 17 teachers were provided two-hour monthly experiences, two all-day sessions, and approximately 20 hours dealing with topics such as curriculum writing, new-teacher orientation, family support group, and the learning modes. The total number of staff development hours was approximately 50. In addition, a 30 hour inservice course for the seven SFAA paraprofessionals focusing on the adult life cycle was presented by project staff. In January 1977, the School for All Ages was also awarded validation by the Pennsylvania Diffusion Panel.

#### ATTAINMENT OF OBJECTIVES

Objective 1: During the 1976-1977 school year, students participating in AEP programs will improve their reading comprehension skills as evidenced by the following:

(A) A significantly ( $p < .10$ ) greater number of students will demonstrate mastery on the Instructional Objectives Exchange (IOX) criterion-referenced tests of comprehension skills between Fall and Spring administrations of the test series.

Part A of this objective was fully attained.

In consultation with program personnel and reading specialists, selected teachers who were second-year participants in the project's Communications Network training program identified a maximum of eight Instructional Objectives Exchange (IOX) criterion-referenced tests of reading comprehension. These tests were selected because they reflected the major emphases of the project's training experiences. Each test had two parallel forms. Form A was administered during the Fall and Form B during the Spring. Eight teachers from Grades 3 through 8 were initially selected for participation in this evaluation procedure. Six teachers provided both pretest and posttest results for final analysis. One teacher withdrew from the project prior to posttesting; one teacher did not administer the posttest.

Using the McNemar test for the significance of changes at each grade level, the data analysis revealed a significant ( $p < .10$ ) increase in the number of students achieving mastery (80% correct for each test) on all tests administered.

(B) participating students will attain significantly ( $p < .10$ ) higher mean scores on the 1977 California Achievement Tests (reading comprehension section) than a comparison group of students from the same school or from respective feeder schools.

Part B of this objective as stated in its present form was determined to be inappropriate because the distribution of previous year's CAT scores for project students was significantly lower than the distribution of CAT scores for the available comparison group of students.

The project staff and the evaluation team believed that a direct comparison of 1977 CAT scores for project and non-project students would be inappropriate. Instead, the project staff requested that a comparison between the 1976 and 1977 scores from the total reading subtest be conducted for each school.

Table 1 shows the distribution of total reading subtest scores for each year of the project's operation. The results indicate a steady improvement from the project's inception. During the past school year (a) the proportion of students scoring below the 16th percentile was reduced from 50% to 36% at one school and from 37% to 31% at the second school; (b) 1977 scores are higher than 1976 scores in Grades 2, 3, 4, 5, 6, 7, 8 and 10 at Logan and in all grades at Northern Liberties; and (c) half the students at Northern Liberties and nearly three-fourths at Logan at least maintained their national percentile ranks in reading between 1976 and 1977.

(C) at least 80% of participating students will gain at least one book level and at least 50% will gain at least two book levels between Fall and Spring administrations of the Informal Reading Inventory (IRI).

Part C of this objective was partially attained. The expected proportions of students gained two book levels but did not gain one book level.

The Informal Reading Inventory (IRI) was administered to all SFAA students in the Fall and Spring. However, pretest and posttest results were submitted for only 65 students. Of these 65, 48 (74%) gained at least one book level while 35 (54%) gained at least two book levels.

Objective 2: During the 1976-1977 school year, students participating in AEP programs will improve in affective learning factors which directly contribute to reading and general academic performance as evidenced by the following:

(A) participating students will show significantly ( $p < .10$ ) greater persistence on a reading task (sustained silent reading) between Fall and Spring administrations of the Reading Persistence Summary

Part A of this objective was attained.

Using a set of books of appropriate reading difficulty and suitable interest the evaluation team conducted Sustained Silent Reading periods in five Communications Network Classrooms during the Fall and Spring. These five classes were selected by project staff as appropriate for this evaluation procedure.

During a sustained silent reading period students select an appropriate book for reading. No one is permitted to bother anyone else including the teacher. Noise is generally not permitted. The project staff believed that CN pupils would persist in reading for greater proportions of time as the school year progressed. Persistence was defined as continuous eye-contact with the selected book. The sustained silent reading period was chosen by the evaluation team as the most appropriate setting for measuring persistence.

After the pupils had utilized a three-minute period for book selection, the evaluator began data collection. Records of each of five randomly selected students' persistence in reading their self-selected books were recorded on the Reading Persistence Summary form. The records included a "+" for eye contact with the book or a "0" for non-eye contact. The evaluator entered as many records as possible for each of the five pupils during the first five minutes of the period. Judgements were determined instantly when the evaluator looked at each pupil.

Reading-persistence scores indicate the percentage of time during which students persist in reading during the sustained silent reading period. The mean Fall pretest score was 73.2 and the mean Spring posttest score was 90.0. The positive difference of 16.8 was significant beyond the .10 level.

(B) participating students will demonstrate mastery of a significantly ( $p < .10$ ) greater number of skills related to the four learning modes (cooperative, competitive, independent, and dependent) and will improve significantly their ability to choose the most appropriate mode for a series of given learning tasks included in the Learning Modes Checklist administered in the Fall and Spring.

Attainment of Part B of this objective as stated could not be determined because of the changing focus of the project as it developed during the year. The project staff revised their specified expectations to include the following: (a) a greater proportion of project students will provide more complete definitions of the terms cooperative, competitive, independent, and dependent between pre- and post-interviews; and (b) a greater proportion of project students will provide more detailed verbal descriptions of pictures depicting the four learning modes between pre- and post-interviews.

An interview schedule was developed cooperatively between the project staff and evaluation team. The interview consisted of (a) the names of the four learning modes printed on large paper, (b) magazine pictures of people learning and working in different ways, (c) one page of unfinished stories, and (d) miscellaneous questions about the four modes.

A random sample of students was selected from both schools. The sample consisted of 20% of the combined population and was stratified by grade and by

community/family group. The individual interviews were administered in December and June. A content analysis of the responses was conducted on both pre- and post-results.

A total of 46 students provided both pre- and post-interview results. Regarding the definitions of terms, 26 students provided more complete definitions, 9 students provided similar definitions, and 11 students provided less complete definitions on the post interview. The McNemar test for the significance of changes revealed a significant increase ( $p < .05$ ) had occurred in the number of students providing more complete definitions.

Regarding the descriptions of pictures depicting the four learning modes, 29 students provided more detailed verbal descriptions, 7 students provided similar descriptions, and 10 students provided less detailed descriptions on the post interviews. Again the data analysis revealed a significant increase ( $p < .01$ ) in the number of students providing more detailed descriptions.

(C) participating students will demonstrate greater attention to learning experiences during a regular classroom period as evidenced by a significant decrease in the time required to gain students' attention prior to and during planned learning experiences between Fall and Spring observations of project classes.

Attainment of Part C of this objective could not be determined because organizational and administrative changes at the target school ameliorated the existing problems and minimized the necessity for intensive training of teachers, paraprofessionals, administrators, and parents as planned.

Objective 3. The Affective Education program will provide appropriate training experiences and/or will serve as a resource for a significant number of teachers, paraprofessionals, and parents of eligible students as evidenced by the following: (A) at least 45 teachers will receive 50 hours of training devoted to classroom interventions designed to help students to avoid or overcome "blocks" to learning to read; (B) at least 15 teachers will receive an average of 150 hours of training devoted to classroom interventions designed to help students master skills required for the four learning modes with special emphasis on the cooperative mode in cross-age learning settings; (C) at least 15 teachers will receive a total of 30 hours of training devoted to school and classroom limits and boundaries; (D) at least 10 parents in one school will receive training in the management of discipline issues using an affective orientation with the purpose of enhancing home learnings; (E) at least 150 hours of training services will be delivered to parents of eligible students. These services will include workshops, home- and-school meetings, and weekend conferences focusing on parent-child communication skills, the parents' role in childrens' learning, and family scripts that influence learning; and (F) at least 1,500 teachers and paraprofessionals will receive training and support in the use of affective techniques.



This objective was considered fully attained.

An analysis of logs of all AEP training experiences revealed the following pertaining to respective parts of the objective: (A) 48 teachers received at least 66 hours of training devoted to classroom interventions designed to help students to avoid or overcome "blocks" to learning to read; (B) 17 teachers received between 30 and 50 hours of training during the school year devoted to classroom interventions designed to help students master skills required for the four learning modes with special emphasis on the cooperative mode in cross-age learning settings (additional hours were planned to occur during the subsequent summer months); (C) 22 teachers received 30 hours of training devoted to school and classroom limits and boundaries; (D) ten parents from one school received long-term training in the management of discipline issues using an affective orientation with the purpose of enhancing home learnings; (E) 374 hours of training services including workshops, home-and-school meetings, and weekend conferences were delivered to parents of eligible students; and (F) 2,104 teachers and 55 paraprofessionals received training and support in the use of affective techniques.

#### SUMMARY AND CONCLUSIONS

The Affective Education project was created to meet the needs of teachers, students, parents, and administrators through the development of new curricula and teaching techniques, the creation of more humanistic and supportive classroom climates, the prevention and removal of psychological blocks to learning and the provision of a resource center, in-service courses, and teacher and parent affective training.

The project's intended mode of operation was fully implemented. Throughout the school year the four branches of the project conducted extensive training and support for School District personnel and parents.

Three of the project's stated objectives were fully attained; one objective was partially attained; and three objectives, as stated, were not applicable to the current year's evaluation because of the changing nature of the project as the year progressed. It was discovered that students in AEP programs improved their reading comprehension skills to the extent that (a) a significantly greater number of students demonstrated mastery on a series of criterion-referenced tests of reading comprehension skills, (b) expected proportions of project students made at least one year's progress in reading as measured by a standardized achievement test, and (c) expected proportions of project students gained at least two book levels during the school year as measured by an informal reading inventory. Moreover, students participating in AEP programs improved in affective learning factors which directly contribute to reading and general academic performance to the extent that between the beginning and end of the current school year they (a) persisted on a reading task for a significantly greater proportion of time; (b) provided more complete definitions of the terms cooperative, competitive, independent and dependent; and (c) provided more detailed verbal descriptions of pictures depicting the four learning modes.



For the second consecutive year, the project received recognition from the Pennsylvania Diffusion Panel. The Panel awarded validation for two project efforts (1) the Communications Network program dealing with teacher expectations and (2) the Schools for All Ages.

TABLE 1

DISTRIBUTIONS OF TOTAL READING SUBTEST SCORES  
FROM CAT-70 FOR SCHOOLS FOR ALL AGES STUDENTS

| Percentile<br>Distribution | Logan |      |      | Northern Liberties |      |
|----------------------------|-------|------|------|--------------------|------|
|                            | 1975  | 1976 | 1977 | 1976               | 1977 |
| Below 16th                 | 41%   | 37%  | 31%  | 50%                | 36%  |
| 16th-49th                  | 44%   | 41%  | 44%  | 41%                | 52%  |
| 50th-84th                  | 10%   | 16%  | 17%  | 9%                 | 8%   |
| Above 84th                 | 4%    | 6%   | 8%   | 0%                 | 4%   |

## BENCHMARK

This project serves underachieving pupils in reading and mathematics by providing selected teachers and aides in self-contained classrooms with emphasis placed on basic skills.

### RATIONALE

Ongoing analyses of pupil achievement in Grades 4-6 indicate very high percentages of underachieving children. Many of these children are considered to have the potential to attain needed skills in reading and mathematics. Providing an informal instructional setting with 20 children assisted by a teacher and an aide has proved to be a viable approach to assisting these children.

Personal attention and individualized diagnosis and prescription are the keystones of the project. Having two classes at each school provides reinforcement for the teachers and allows great latitude for scheduling.

### EXPECTED OUTCOMES

Pupils are expected to attend school more frequently, to develop acceptable social patterns, and to improve their skills in reading and mathematics.

### PREVIOUS FINDINGS

The project was initiated in January 1975 into two classrooms at 31 elementary schools. All five objectives related to pupils' reading and mathematics skills were fully attained. Eighty-four percent of the pupils had an attendance rate of 80% or better. During the 1975-1976 school year, the project continued to be implemented at the 31 elementary schools. All objectives were attained. In reading, the median instructional book level was raised to a Book Three; phonics mastery was attained by 53% of the children. In mathematics, the pupils were assessed with levels tests, 29.5% gained two levels and 22.5% gained three or more levels.

### EVALUATION OF THE CURRENT YEAR

Pretests in reading and mathematics were administered early in the school year to provide baseline data for the evaluation and diagnostic data for the teacher to prescribe remedial work. Posttest scores were compared with the pretest scores to determine gains in achievement. Systematic observation of the instructional process was conducted by the evaluation team.

## IMPLEMENTATION

The project continued to serve 31 Title I schools with each school having two Benchmark classes. Most of these classes served 20 pupils, but the number varied somewhat at the end of the year because of the mobility of pupils. Instruction was provided by Benchmark teacher, assisted by a full-time aide in self-contained classrooms.

Thirty-four observations were made of selected classes using the observational checklist. During these structured observations based upon four five minute intervals per observation, pupils were engaged in learning tasks 93% of the time. This included doing assignments in workbooks, working at listening centers, playing educational games, and using audio-visual devices.

Teachers used 71% of the observed time working with groups or individual children and circulating among children answering questions or checking work. Sixty-two percent of the observed five minute intervals were related to language arts instruction, 16% were related to mathematics skill development, and 16% were mixed content lessons which combined history and language arts, or mathematics and science. Teachers used more than two kinds or levels of materials with their pupils 66% of the time intervals indicating a differentiated approach rather than a single, overall approach to instruction. Most rooms had seating arrangements based upon groupings of children rather than a row by row arrangement. The classroom environment tended to be relaxed and industrious. Rooms abounded with charts, tables, sayings, and pupils' work in the form of stories, poems, pictures and 3-dimensional items of straw, string, or cardboard.

The project continued to be managed by a project director assisted by a team of three field coordinators (one coordinator left to become a principal and was replaced). The coordinators conducted monthly full-day staff development sessions, acted as communication links, and assisted new teachers.

Staff development continued to be conducted by having two sessions a month. Approximately half of the teachers attended the first day, followed by the other half the second day. In this way, groups were kept to a manageable size of about 30 teachers. Morning sessions tended to be organized around administrative or managerial tasks. Afternoon sessions were more skill or subject oriented. Over the three years of project operation, most of the original strategies and guidelines have been retained.

## ATTAINMENT OF OBJECTIVES

Objective 1: By the end of the school year, 50% of the pupils with 80% attendance will achieve 90% mastery of the word-recognition skills measured by the Sight and Sound Inventory A and B.

This objective was attained.

The Sight and Sound Inventory was administered by the teachers to total class groups. The test was administered in September or October to determine each pupil's skill level in the areas of initial and final consonants, rhyming, blends, digraphs, three letter combinations, final sounds, and vowel sounds.

During the school year, phonics skill areas of weakness for each pupil were taught, reviewed, and reinforced. In May, an alternate form of the test was administered to each class to determine mastery levels. The end of year raw score mean for the 85 item test was 74 items (86%) for 1,159 pupils.

Of the 990 pupils who attended 80% of the days in the school year, 527 correctly marked 90% or more of the items tested. Thus, 53.6% of the pupils achieved this objective. Of the remaining children, 324 (32.9%) attained a 75-89% mastery, and 132 (13.5%) attained less than a 75% mastery level. Of those pupils attaining a 90% mastery level or more, one-fourth had been in the project for only one year. (See Tables 1 and 2.)

Objective 2: By the end of the school year, 70% of the pupils with 80% attendance will gain the reading skills of one book level as measured by teacher scoring of an Individual Reading Inventory.

This objective was attained.

Pupils were tested in September to determine each pupil's skill level. The materials and assignments were based upon these reading level determinations. The median reading level for the total project group was a Book 2<sup>1</sup>. When retested in May, using an alternate form of the test, (an actual time span of eight months), the median level rose to a Book 3<sup>1</sup> level. This gain is considered one year's gain.

The Standard Reading Inventory was administered to all project pupils on an individual basis. Of the children with paired scores, 803 or 86.8% gained one book level; 570 or 61.6% gained two or more levels. This achievement is based upon the instructional reading level criteria of 95-99% correct in word recognition and of 75-89% correct on the comprehension questions.

Table 3 indicates the gains made by pupils according to their grade levels. Pupils in upper grades did slightly better than the 4th graders. Table 4 indicates the growth made by students based upon their length of service in the program. There were only minor differences among groups.

Objective 3: By the end of the school year, 60% of the pupils with 80% attendance will gain one level as measured by the Philadelphia Mathematics Evaluation Tests.

This objective was attained.



The Philadelphia Mathematics Evaluation Tests are a series of domain reference tests with a selected mastery criterion. Selected skills are tested within each level. The levels were designed to hierarchal.

Of those pupils with 80% attendance and paired scores, 88% gained a minimum of one mathematics level; 54% gained two or more levels. The median end-of-year level for the total project on the Philadelphia Mathematics Evaluation tests was level seven. The average skill development was slightly less than two levels. Tables 5 and 6 indicate the degree of change by grade and by years in the program.

#### SUMMARY AND CONCLUSIONS

This year marks the end of the third year of operation of the Benchmark Project. In actuality, the classroom program is only 2½ years old, having been implemented in classrooms in January 1975. This program was designed to do everything possible to remediate identified weaknesses of children with the greatest skill.

Each of the project objectives was attained this year. The median instructional reading level was raised from Book 2 to Book 3. When tested for 85 phonics sounds, more than half of the pupils identified 90% or more correctly.

According to the Philadelphia Mathematics Evaluation Tests, 54% of the pupils gained two or more levels. The median end-of-year math level was seven. The project sponsored exhibitions of the children's work at the schools and held a field day games competition for the total group at Fairmount Park. In spite of staff turnover of teachers and aides, the project has maintained the integrity of the major provisions of its original proposal.

TABLE 1

ACTIVELY PARTICIPATING<sup>1</sup> BENCHMARK PUPILS ATTAINING MASTERY  
ON THE SIGHT AND SOUND INVENTORY A & B BY GRADE LEVEL

| Mastery Level Attained | Grade 4 | Grade 5 | Grade 6 | Total      |
|------------------------|---------|---------|---------|------------|
| 90%-100% (77-85 Items) | 76      | 184     | 267     | 527 (54%)  |
| 75%- 89% (64-76 Items) | 104     | 126     | 94      | 324 (33%)  |
| Below 75% (-63 Items)  | 61      | 46      | 25      | 132 (13%)  |
| Total                  | 241     | 356     | 386     | 983 (100%) |

<sup>1</sup>At least 80% attendance.

TABLE 2

ACTIVELY PARTICIPATING<sup>1</sup> BENCHMARK PUPILS ATTAINING MASTERY  
ON SIGHT AND SOUND INVENTORY A & B  
BASED ON YEARS IN THE PROJECT

| Mastery Level Attained<br>(85-Item Test) | 1 Year | 2 Years | 3 Years | Total      |
|------------------------------------------|--------|---------|---------|------------|
| 90%-100% (77-85 Items)                   | 216    | 92      | 190     | 498 (54%)  |
| 75%-89% (64-76 Items)                    | 185    | 54      | 59      | 298 (33%)  |
| Below 75% (0-63 Items)                   | 80     | 24      | 17      | 121 (13%)  |
| Total                                    | 481    | 170     | 266     | 917 (100%) |

<sup>1</sup>At least 30% Attendance

TABLE 3

ACTIVELY PARTICIPATING<sup>1</sup> BENCHMARK PUPILS SHOWING VARIOUS CHANGES  
IN READING LEVEL<sup>2</sup> ON STANDARD READING INVENTORY BY GRADE LEVEL

| Change Occurring between<br>Pretest and Posttest | Grade 4 | Grade 5 | Grade 6 | Total      |
|--------------------------------------------------|---------|---------|---------|------------|
| Gain of 2 Books or More                          | 126     | 211     | 233     | 570 (62%)  |
| Gain of 1 Book                                   | 66      | 77      | 90      | 233 (25%)  |
| Loss or No Change                                | 35      | 44      | 43      | 122 (13%)  |
| Total                                            | 227     | 332     | 366     | 925 (100%) |

<sup>1</sup>At least 80% attendance.

<sup>2</sup>Instructional reading level: word recognition 95-99% correct;  
comprehension 75-89% correct.

TABLE 4

ACTIVELY PARTICIPATING<sup>1</sup> BENCHMARK PUPILS SHOWING VARIOUS CHANGES  
IN READING LEVEL<sup>2</sup> ON STANDARD READING INVENTORY BASED ON  
YEARS IN THE PROJECT

| Change Occurring between<br>Pretest and Posttest | 1 Year | 2 Years | 3 Years | Total      |
|--------------------------------------------------|--------|---------|---------|------------|
| Gain of 2 Books or More                          | 271    | 106     | 167     | 544 (63%)  |
| Gain of 1 Book                                   | 106    | 44      | 56      | 206 (24%)  |
| Loss or No Change                                | 66     | 18      | 27      | 111 (13%)  |
| Total                                            | 443    | 168     | 250     | 861 (100%) |

<sup>1</sup>At least 80% attendance.

<sup>2</sup>Instructional reading level: Word recognition 95-99% correct;  
comprehension 75-89%

TABLE 5

ACTIVELY PARTICIPATING<sup>1</sup> BENCHMARK PUPILS SHOWING VARIOUS CHANGES  
IN LEVEL ON PHILADELPHIA MATHEMATICS EVALUATION TEST BY GRADE

| Change Occurring between<br>Pretest and Posttest <sup>2</sup> | Grade 4 | Grade 5 | Grade 6 | Total      |
|---------------------------------------------------------------|---------|---------|---------|------------|
| Gain of 4 Levels or More                                      | 10      | 14      | 49      | 73 ( 8%)   |
| Gain of 3 Levels                                              | 17      | 44      | 74      | 135 (14%)  |
| Gain of 2 Levels                                              | 71      | 119     | 110     | 300 (32%)  |
| Gain of 1 Level                                               | 86      | 123     | 113     | 322 (34%)  |
| Loss or No Change                                             | 43      | 41      | 28      | 112 (12%)  |
| Total                                                         | 227     | 341     | 374     | 942 (100%) |

<sup>1</sup>At least 80% attendance.

<sup>2</sup>The Philadelphia Mathematics Evaluation Test has no Level 9. A change from Level 8 to Level 10 is considered a gain of one level. Level 18 is the test's highest designation.

TABLE 6

ACTIVELY PARTICIPATING<sup>1</sup> BENCHMARK PUPILS SHOWING VARIOUS CHANGES  
IN LEVEL ON PHILADELPHIA MATHEMATICS EVALUATION TEST BASED ON  
YEARS IN THE PROJECT

| Change Occurring between<br>Pretest and Posttest | 1 Year | 2 Years | 3 Years | Total      |
|--------------------------------------------------|--------|---------|---------|------------|
| Gain of 4 Levels                                 | 25     | 8       | 41      | 74 ( 8%)   |
| Gain of 3 Levels                                 | 63     | 24      | 49      | 136 (16%)  |
| Gain of 2 Levels                                 | 152    | 61      | 71      | 284 (33%)  |
| Gain of 1 Level                                  | 152    | 60      | 80      | 292 (33%)  |
| Loss or No Change                                | 47     | 14      | 20      | 91 (10%)   |
| Total                                            | 449    | 167     | 261     | 877 (100%) |

<sup>1</sup>At least 80% attendance

## BILINGUAL EDUCATION

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

The Bilingual Education project is designed to correct the basic academic skill deficiencies of Spanish-speaking children in the nonpublic schools.

### RATIONALE

It is the primary assumption of this project that basic skill deficiencies of the Spanish-speaking children in the target-area schools are generally attributable to inadequate development of language skills, especially English.

Other assumptions are (a) that the poor performance of the target-area Spanish-speaking children on standardized achievement tests is attributable to their difficulties with English language skills, (b) that Spanish-speaking children's academic abilities are equal to those of their English-speaking peers, (c) that Spanish-speaking children recently arrived from Puerto Rico require a period of adjustment and orientation to their new environment, and (d) that development of the Spanish-speaking child's competency in Spanish language skills can facilitate development of his English language skills.

The Bilingual Education project provides services to meet the needs of Spanish-speaking children by developing their English and Spanish language skills and by developing basic academic skills.

### EXPECTED OUTCOMES

It is expected that through the efforts of the Bilingual Education project, Spanish-speaking pupils will demonstrate increased achievement in basic skill areas.

### PREVIOUS FINDINGS

In the project's initial year (1972-1973) the evaluation was formative and focused on implementation and attainment of the project's enabling objectives. Some difficulties with organization and definition of responsibilities were found.

In the 1973-1974 evaluation, the results of a group of standardized tests in English reading, Spanish reading, English skills, and mathematics indicated that the pupils could read at least as well in English as in Spanish. Comparison of 1973 and 1974 scores from the Bilingual Education Project Student Survey indicated no change in the self-concepts or school-related attitudes of the pupils.



In the 1973-1974 and 1974-1975 evaluations, the project's cognitive objectives for the Cariño Center (improvement of skills in reading and mathematics) were not attained. Objectives for the auxiliary teacher component were attained in the first grade but not in the other grades. In 1975-76, the objectives for the Cariño Center were attained, as were the objectives for the first grade of the auxiliary teacher component.

#### EVALUATION OF THE CURRENT YEAR

The current year's evaluation of the Bilingual Education project focused on project implementation and pupils' progress in English reading and mathematics.

#### IMPLEMENTATION

During 1976-1977, the project's intended mode of operation was fully implemented.

The Bilingual Education project provided bilingual auxiliary teachers who worked with Spanish-speaking children in participating schools; and it operated the Cariño Center, an all-day school.

Approximately 47 pupils (Grades 4-8) from seven participating schools attended the Cariño Center. Their daily program included instruction in mathematics, social studies, reading, language arts, and Spanish. In order to meet specific skill needs, pupils were individually rostered. The language of instruction also varied according to pupils' needs; although by May, English predominated.

Auxiliary teachers were assigned to five of the ten participating schools. Four of the schools received full-day service. The other received half-day service. The types of services provided by the teachers were based upon the needs of the individual schools. There were two general patterns of operation for auxiliary teachers. At four schools, auxiliary teachers provided remedial services to groups of two to eight pupils for 30 minutes to one hour daily. At the fifth school, the auxiliary teacher taught a group of 13 first graders for the entire day.

Project screening procedures were used to select pupils for participation in both the Cariño Center and Auxiliary Teacher components. These procedures included assessment of English comprehension, reading level, quality and kind of language used, and degree of abstract thinking (in English and Spanish).

#### ATTAINMENT OF OBJECTIVES

Objective 1: Cariño Center pupils will increase their instructional reading levels to the extent that, between the September pretest and May posttest, 75% of them will gain at least one book level on a group informal reading inventory.

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This objective was considered attained. Although in the strictest sense the criterion for attainment was not met, the intent of the objective was satisfied.

In formal reading inventories were administered to 46 Cariño Center pupils in September and May. From pretest until posttest, 71.7% of these pupils advanced one or more instructional book levels, and their median gain was 2 book levels.

It is likely that the small discrepancy between 71.7% and the intended 75% is attributable to the stringency of the goal statement as it applied to a small number of pupils. The project's success in effecting increased reading achievement is supported by the fact that the majority of pupils gained 2 or more book levels (not the one level that was expected).

Objective 2: During the school year, Cariño Center pupils will increase in mathematics achievement to the extent that 60% of them will demonstrate a month-for-month gain in GE level on the KeyMath Diagnostic Arithmetic Test between pretest and posttest.

This objective was attained.

The KeyMath Diagnostic Arithmetic Test was administered in September and May to 41 Cariño Center pupils. Pretest scores ranged from 1.6 to 5.4, with a mean of 3.15; posttest scores ranged from 2.8 to 5.9, with a mean of 4.25. The expected minimum month-for-month gain (0.8 GE points) was achieved by 68.3% of the group, (in excess of the anticipated 60%), and their median gain was 1.0.

Objective 3: Pupils receiving remedial services from the Bilingual Education auxiliary teachers in the feeder schools will improve their achievement in the basic skills to the extent that 60% of the pupils receiving remedial service in mathematics will make at least a month-for-month gain in GE level, as measured by the KeyMath Diagnostic Arithmetic Test, between September pretest and May posttest; and two-thirds of the pupils receiving remedial service in English language skills will master at least one reading book level, as measured by the mastery tests of their basal reader series, by May.

This objective was attained.

In September and May, the KeyMath Diagnostic Arithmetic Test was administered to 42 pupils who received full-day service from the Bilingual Education auxiliary teacher. Of the 42 pupils tested, 29 (69%) gained at least the expected 0.8 points in GE scores between September and May administrations of the KeyMath diagnostic Arithmetic Test. The median gain for the group was 1.2 points.

For the 60 pupils receiving instruction in remedial language skills, results of basal reader series mastery tests, administered in May, indicated that 78% of them mastered one reading book level. This was more than the expected two-thirds.

## SUMMARY AND CONCLUSION

The Bilingual Education project was designed to correct Spanish-speaking children's basic skill deficiencies which were attributable to inadequate language facility.

The project's intended mode of operation was fully implemented. The Cariño Center provided an all-day program for pupils with minimal facility in English, while the Bilingual Auxiliary Teacher component instructed Spanish-speaking pupils in the participating schools.

Objectives for both components were attained. The majority of Cariño Center pupils gained 2 or more book levels in reading (more than the expected 1 book level). Their 1.0 year average gain in mathematics exceeded the expected month-for-month gain. The auxiliary teacher component was equally effective in contributing to the mathematics and reading progress of its pupils.

This has been the project's most successful year since its inception. It appears that the staff's efforts, over the past 3 years, in the development of a pupil screening system and in upgrading instruction, are beginning to have an impact on project outcomes.

## COMPREHENSIVE MATHEMATICS "A": ELEMENTARY MATHEMATICS RESOURCE TEACHER

The Elementary Mathematics Resource Teacher (EMRT) project is designed to improve the computational skills of Title-I-eligible pupils in Grades 2-6.

### RATIONALE

The pupils for whom the EMRT project was designed have repeatedly exhibited a deficiency in mathematics as indicated by teacher assessment and by their scores on the California Achievement Tests. The project was created to reduce the skill deficiencies of these pupils by providing a mathematics resource teacher to work with the eligible pupils and teachers of each Title I school. The EMRTs stress the importance of basic mathematical skills, suggest and demonstrate methods of teaching mathematics, delineate what should be taught and in what sequence, and provide instruments for assessing pupil progress.

### EXPECTED OUTCOMES

The project is designed to improve the mathematical skills of participating Title-I-eligible pupils. Since many Title I children have been known to have poor attendance records, it is expected that those who attend regularly will show greater achievement than those who are poor attenders. Through the implementation of the project, there should be a reduction in the percentage of pupils obtaining Total Mathematics scores below the 16th percentile on the California Achievement Tests. Pupils also should show gains in their instructional mathematics levels on the Philadelphia Mathematics Evaluation Test.

### PREVIOUS FINDINGS

During the project's initial year (1972-1973), a mathematics specialist was assigned to each of the participating schools. As a result of needs recognized during the initial year, emphasis in the 1973-1974 school year was placed on individualization of instruction and continual diagnosis and evaluation of pupil progress. Although the project was generally successful in improving pupils' mathematical skills, the specific objectives were found to be unrealistically high. The 1974-1975 objective of a median growth of two instructional levels was attained.

During the 1975-1976 school year, pupils significantly improved their scores on the Mathematics subtest of the California Achievement Tests and again achieved the project goal of a growth of two instructional levels on the Philadelphia Mathematics Evaluation Test. On both measures of mathematical skills, pupil achievement was directly related to regular attendance at remediation sessions.



## EVALUATION OF THE CURRENT YEAR

As in previous years, the current year's evaluation of the Elementary Mathematics Resource Teacher (EMRT) project focused on the project's progress toward improving the mathematical skills of participating Title-I-eligible pupils. Project records of individual pupils, observations, and interviews with project teachers were used to determine the level of project implementation. Pretest and posttest scores on the Philadelphia Mathematics Evaluation Test and the California Achievement Tests were used to measure pupil achievement.

### IMPLEMENTATION

During 1976-1977, the Elementary Mathematics Resource Teacher (EMRT) project was fully implemented as planned. The Division of Mathematics Education provided eight hours of staff development during the teaching day at the Durham Child Development Center and at district locations. At these sessions, the EMRTs shared their problems, progress, and mathematics-activity ideas. They also learned about teaching techniques and activities for classroom use from guest speakers and district collaborators. EMRTs who were new to the program were provided with additional monthly training sessions on such topics as the "levels" approach, program implementation, the EMRT role, and record keeping.

Project records indicated that 112 EMRTs provided remediation services to approximately 6,700 Title-I-eligible pupils in Grades 2-8. They also gave assistance to approximately 3,300 Title-I-eligible pupils through demonstration lessons or small-group instruction in the classroom. Remediation was provided during class periods other than those for mathematics, English, or reading.

Using the Observational Checklist, the evaluator interviewed and observed 24 EMRTs teach a remediation or demonstration lesson. The EMRTs allotted 6-14 periods each week for remediation of selected Title-I-eligible pupils; 5-27 periods for staff and curriculum development; and 0-6 periods for evaluating and monitoring pupil progress and preparing instructional materials.

Staff and curriculum development was provided to classroom teachers through demonstration lessons in the classroom (2-19 periods per week), presentations at faculty meetings, workshops for teachers and parents, and individual conferences with principals, parents, and teachers. In working with teachers in their school, the EMRTs reported assisting the teachers in the use of the "levels" approach and the integration of mathematics with subjects such as reading, social studies, and science. Methods, activities, and techniques were also demonstrated to improve mathematics teaching skills. In some cases, these activities coincided with ongoing lessons, and in other cases were used to improve pupils' common weaknesses. In schools with new teachers, additional assistance was provided in such areas as record keeping, classroom management techniques, pupil grouping, and preparation of math lessons.



Because of differences among schools in the number of eligible pupils, scheduling of classes, and age of pupils selected for remediation, the project was implemented in various ways. In 19 of the 24 schools visited, EMRTs offered remediation services to five groups of pupils for two 45-minute periods each week. In five schools, remediation services were offered in a variety of ways. Remediation class sizes ranged from 4-18 pupils.

The evaluator observed 21 EMRTs teach a remediation lesson. In general, grouping was based on the pupil's grade, Levels test results, and availability of time in pupil schedules. The "levels" approach was emphasized by 15 of the 24 teachers. Instruction in basic mathematical skills was emphasized by 19 teachers.

In 15 of the 21 remediation sessions observed, the entire class worked on the same activity with up to five changes in activities during a class period. The teachers provided individualized instruction in two classes, and group instruction in four classes. Emphasis was on the development of computational skills through review and drill with games, worksheets, hands-on activities, blackboard activities, filmstrips, and listening activities. Remediation class enrollment ranged from 6-17 pupils; attendance ranged from 4-17 pupils.

In the three demonstration lessons observed, class attendance ranged from 21-33 pupils. The entire class generally worked on the same activity with one change in activity observed in two of the classes. Emphasis was on review and drill of basic number facts and operations.

#### ATTAINMENT OF OBJECTIVES

Objective 1: Participating pupils in Grades 2-8 will improve their mathematics skills to the extent that they will demonstrate on the numeration, whole numbers, and fractional numbers sections of the Philadelphia Mathematics Evaluation Test an average gain of two instructional levels during the 10-month school year.

The objective was fully attained. Pupils selected by the EMRTs for remediation sessions were administered the numeration, whole numbers, and fractional numbers sections of the Philadelphia Mathematics Evaluation Test (Levels) in October 1976 and May 1977. Data on attendance at remediation sessions were collected until April 29 for all pupils who had been selected to determine the effects of attendance on pupil achievement. The number of remediation sessions offered ranged from 20-86 sessions.

The records of 5,607 pupils in Grades 2-8 selected for remediation sessions from 87 schools were examined. Data from 1,144 pupils could not be utilized because of transfer, dropout, or missing test results. The remaining 4,463 pupils demonstrated an average gain of 1.6 instructional levels during the 7-month period between pretest and posttest. Extrapolated for a 10-month school year, the average gain of 2.3 levels met the criterion stated in the objective. Pupil achievement did not vary greatly among the grade levels.

Attendance at remediation sessions appeared to be related to pupil achievement. As shown in Table 1, 3,648 pupils had attended at least 75% of their remediation sessions. They demonstrated an average gain of 1.6 instructional levels in seven months. The 815 pupils who attended less than 75% of their remediation sessions demonstrated an average gain of 1.3 levels in the same period.

In general, pupils made significant gains in levels on the Philadelphia Mathematics Evaluation Test. Regular attendance at remediation sessions was directly related to pupil achievement.

Objective 2: Participating pupils in Grades 2-6 will improve their mathematics skills to the extent that between February 1976 and February 1977, the percentage of pupils obtaining Total Mathematics scores below the 16th percentile on the California Achievement Tests will be reduced by three percentage points.

The objective was fully attained. The Mathematics subtest of the California Achievement Tests was administered to pupils in 112 Title I schools in February 1977.

The records of 4,463 pupils in Grades 2-6, selected to determine the attainment of Objective 1, were also analyzed for this objective. An additional 2,635 records of pupils who had not been invited to remediation sessions were also examined. From this second group of pupils, the records of 723 pupils could not be analyzed because of transfer, dropout, or missing test results. All 4,463 pupils who had been invited to remediation sessions and 1,912 pupils who had not been invited to remediation sessions had scored below the 16th percentile on the February 1976 administration of the CAT.

In 1977, a significant number of pupils improved their mathematical skills. Of the 4,463 pupils who had been invited to remediation sessions, 35% scored at or above the 16th percentile. The criterion stated in the objective was greatly exceeded.

Overall, 37% of the 6,375 pupils scored at or above the 16th percentile on the CAT. As shown in Table 2, attendance at remediation sessions was related to pupil achievement. Among the 3,648 pupils who attended at least 75% of their remediation sessions, 1,544 pupils scored at or above the 16th percentile in 1977. This reduced by 42% the number of pupils scoring below the 16th percentile in 1976. Among the 815 pupils who attended less than 75% of their remediation sessions, 294 pupils increased their 1977 scores to or above the 16th percentile. Their 1976 numbers were reduced by 36%. Among the 1,912 pupils not selected for remediation sessions, 523 scored at or above the 16th percentile. Their reduction was 27%.

In each of the groups, pupil progress was related to the grade level of pupils. The largest percentage of reduction in number of pupils scoring below the 16th percentile was demonstrated by second graders followed by the third, fifth, and sixth graders. The smallest percentage of reduction was demonstrated by fourth graders.

In general, pupils made significant improvement in their scores on the Mathematics subtest of the California Achievement Tests. Regular attendance at remediation

sessions was directly related to pupil achievement. Except for pupils in Grade 4, improvement in score was more likely for younger pupils.

#### SUMMARY AND CONCLUSIONS

The Elementary Mathematics Resource Teacher (EMRT) project was established to improve the basic mathematical skills of Title-I-eligible pupils in Grades 2-8 and to provide a resource teacher to work with the teachers of these pupils. The EMRTs provided remediation sessions to selected Title-I-eligible pupils; staff and curriculum development for classroom teachers, principals, and parents; and monitoring and evaluation of pupil progress.

The project was implemented in 112 Title I elementary schools and was successful in improving the mathematical skills of Title-I-eligible pupils in Grades 2-8 who had obtained CAT Total Mathematics scores below the 18th percentile in 1976. Among pupils who had been invited to remediation sessions, the number of pupils scoring below the 18th percentile in 1976 was reduced in 1977 by 35%. In seven months, these pupils also demonstrated an average gain of 1.6 instructional levels on the numeration, whole numbers, and fractional numbers section of the Philadelphia Mathematics Evaluation Test. Extrapolated for a 10-month school year, the gain of 2.3 instructional levels exceeded the project's goal.

On both measures of mathematical skills, pupils who attended at least 75% of their remediation sessions demonstrated more progress than pupils who attended less than 75% of their sessions. Pupils who were not invited to remediation sessions demonstrated the smallest percentage of reduction in number of pupils scoring below the 18th percentile in 1977 on the Mathematics subtest of the CAT.

Comprehensive Mathematics "A" was successful in improving the mathematical skills of Title-I-eligible pupils in Grades 2-8. Remediation sessions had a positive impact on pupil achievement. Improvement in CAT scores was more likely among younger pupils.

TABLE 1

GAIN IN INSTRUCTIONAL LEVEL BY PUPILS IN  
COMPREHENSIVE MATHEMATICS "A"  
BETWEEN OCTOBER 1976 AND MAY 1977

| Grade | Pupils Who Attended at least<br>75% of Remediation Sessions |           | Pupils Who Attended Less than<br>75% of Remediation Sessions |           |
|-------|-------------------------------------------------------------|-----------|--------------------------------------------------------------|-----------|
|       | No. of Pupils                                               | Mean Gain | No. of Pupils                                                | Mean Gain |
| 2     | 406                                                         | 1.6       | 130                                                          | 1.4       |
| 3     | 529                                                         | 1.6       | 150                                                          | 1.2       |
| 4     | 881                                                         | 1.6       | 143                                                          | 1.4       |
| 5     | 1,040                                                       | 1.7       | 187                                                          | 1.3       |
| 6     | 792                                                         | 1.8       | 205                                                          | 1.4       |
| Total | 3,648                                                       | 1.6       | 815                                                          | 1.3       |



TABLE 2

IMPROVEMENT IN PERCENTILE RANK ON CAT MATHEMATICS SUBTEST  
BY PUPILS IN COMPREHENSIVE MATHEMATICS "A"

| Grade | Pupils Who Attended<br>At Least 75% of<br>Remediation Sessions |                                                | Pupils Who Attended<br>Less than 75% of<br>Remediation Sessions |                                                | Pupils Not Invited<br>To<br>Remediation Sessions |                                                |
|-------|----------------------------------------------------------------|------------------------------------------------|-----------------------------------------------------------------|------------------------------------------------|--------------------------------------------------|------------------------------------------------|
|       | Scoring<br>below<br>16th %ile<br>in 1976                       | Scoring at<br>or above<br>16th %ile<br>in 1977 | Scoring<br>below<br>16th %ile<br>in 1976                        | Scoring at<br>or above<br>16th %ile<br>in 1977 | Scoring<br>below<br>16th %ile<br>in 1976         | Scoring at<br>or above<br>16th %ile<br>in 1977 |
| 2     | 406                                                            | 273 (67%)                                      | 130                                                             | 84 (65%)                                       | 193                                              | 107 (55%)                                      |
| 3     | 529                                                            | 237 (45%)                                      | 150                                                             | 57 (38%)                                       | 194                                              | 54 (28%)                                       |
| 4     | 881                                                            | 248 (28%)                                      | 143                                                             | 28 (20%)                                       | 319                                              | 56 (18%)                                       |
| 5     | 1,040                                                          | 471 (45%)                                      | 187                                                             | 71 (38%)                                       | 678                                              | 189 (28%)                                      |
| 6     | 792                                                            | 315 (40%)                                      | 205                                                             | 54 (26%)                                       | 528                                              | 117 (22%)                                      |
| Total | 3,648                                                          | 1,544 (42%)                                    | 815                                                             | 294 (36%)                                      | 1,912                                            | 523 (27%)                                      |



COMPREHENSIVE MATHEMATICS "B":  
JUNIOR HIGH/MIDDLE SCHOOL MATHEMATICS SPECIALIST

The Junior High/Middle School Mathematics Specialist project is designed to improve the computational skills of Title-I-eligible pupils in Grades 7-9.

RATIONALE

Pupils attending Title I junior high and middle schools have consistently shown a deficiency in basic mathematical skills similar to those exhibited by Title I elementary school pupils. To improve the skills of these pupils, a program which extends the emphasis and content of the elementary school program was considered essential. The Junior High/Middle School Mathematics Specialist project was designed to remediate pupil deficiencies in basic mathematical skills and to provide a resource to help the teachers of Title I pupils improve their instructional skills in basic mathematics.

EXPECTED OUTCOMES

Participating Title-I-eligible pupils should be able to improve their computational skills in mathematics. Pupils with regular attendance in the tutorial sessions and regular classes should be able to show greater achievement than those with low attendance. The regular classroom teachers of these children also should become more knowledgeable of instructional techniques, materials, and activities which could be used for basic mathematics instruction.

PREVIOUS FINDINGS

During 1975-1976, the first year of operation, the project was fully implemented in all Title I junior high and middle schools. Pupils who had attended at least 75% of their regular mathematics classes were successful in improving their computational skills. They met the project's goal of a gain of two instructional levels on the Philadelphia Mathematics Evaluation Test (Survey Form A). Pupils who had attended less regularly did not achieve the goal. No explanation was found for a lack of a relationship between attendance at remediation sessions and gains in achievement level.

EVALUATION OF THE CURRENT YEAR

The current year's evaluation of the Junior High/Middle School Mathematics Specialist project focused on program implementation and pupils' computational skill improvement. Project records, interviews, and observations of the specialists were used to assess program implementation. Staff-development sessions were also observed by evaluators. Pretest and posttest scores on the California Achievement Tests were used to determine project pupils' achievement.

## IMPLEMENTATION

During 1976-1977, the project was fully implemented according to plan in 23 Title I junior high and middle schools. The Division of Mathematics Education provided 10 two-hour staff development sessions during the school year. At these sessions, the mathematics specialists listened to guest speakers and learned about teaching techniques and activities for classroom use.

Examination of the weekly schedules of 21 specialists, submitted in October, showed that they had allotted 54-61% of their time for remediation, 18-32% for staff development, and 11-25% for diagnosing problems and prescribing programs of instruction. At the beginning of the school year, the number of pupils selected from Title I reading classes for mathematics remediation ranged from 185 to 255.

Remediation services were offered to pupils in different ways. In one school, remediation sessions were provided for concentrated periods such that pupils received 28 to 35 sessions over a span of seven or 14 weeks. In another school, remediation was provided weekly till February. Since February, pupils were served daily for periods of three weeks. In the remaining 21 schools, remediation was provided weekly.

Using the Observational Checklist, the evaluator interviewed 16 of the 23 mathematics specialists. The specialists used 15-18 periods for remediation of selected Title-I-eligible pupils; 7-9 periods for staff and curriculum development; and 3-4 periods for monitoring pupil progress and providing diagnoses and programs of instruction for individual pupils.

Staff and curriculum development was provided through demonstration lessons in the classroom (1-9 periods per week), presentations at faculty meetings, workshops for teachers and parents, and individual conferences with principals, parents, and teachers. In nine schools, the specialists reported that they had introduced the "levels" approach. They also shared methods, activities, and techniques to help improve the mathematics teaching skills of the teachers in their schools. In schools with new teachers, additional assistance was provided in such areas as preparation of mathematics lessons, loan of materials, record keeping, and classroom management techniques.

In 15 of the 18 schools visited, pupils were released from one of their five Title I reading classes for mathematics remediation. In one school, weekly remediation was scheduled during science or social studies classes.

The evaluator observed 15 specialists teach a remediation lesson. Remediation class sizes ranged from 10-15 pupils; attendance ranged from 6-14 pupils. In general, grouping was based on grade and availability of time in pupils' schedules.

In 11 of the 15 remediation sessions observed, the entire class worked on the same activity with up to three changes in activities during a class period. The

specialists provided group instruction in three classes, and both individualized and group instruction in one class. Computational skills were emphasized by 14 mathematics specialists. The "levels" approach and skills measured by the CAT were also emphasized. Review and drill was provided with games, learning kits, worksheets, workbooks, hands-on activities, blackboard activities, paper-and-pencil activities, and thinking activities.

#### ATTAINMENT OF OBJECTIVES

Objective 1: Participating pupils in Grades 7-9 who have attended at least 75% of their regular mathematics classes and at least 75% of their remediation sessions will improve their mathematics skills to the extent that they will demonstrate during the 10-month school year a median gain of at least two levels on the Philadelphia Mathematics Evaluation Test.

Attainment of this objective could not be determined because the Philadelphia Mathematics Evaluation Test was not available for administration to pupils in Fall, 1976.

Objective 2: Participating pupils in Grades 7-9 who have attended at least 75% of their regular mathematics classes and at least 75% of their remediation sessions will improve their mathematics skills to the extent that between February 1976 and February 1977, the percentage of pupils scoring below the 16th percentile on the Mathematics Computation section of the California Achievement Tests will be reduced by three percentage points.

The objective was fully attained. The Mathematics Computation section of the California Achievement Tests (CAT) was administered to pupils in Title I schools in February 1977. Data on attendance at remediation sessions were collected until April 29 for all pupils who had been selected to determine the effect of attendance on pupil achievement. The number of remediation sessions offered ranged from 2-36 sessions.

The records of 4,738 pupils in Grades 7-9 from 22 schools were examined. Data from 1,348 pupils could not be utilized because of transfer, dropout, or missing test results. The records of the remaining 3,387 pupils were used to determine pupil achievement between February 1976 and February 1977. All of these pupils had scored below the 16th percentile on the CAT in 1976.

Overall, a significant number of pupils improved their computational skills. Of the 3,387 pupils who had been invited to remediation sessions, 24% scored at or above the 16th percentile in 1977.

Pupil achievement was related to attendance at regular mathematics classes and at remediation sessions. As shown in Table 1, 1,913 pupils attended at least 75% of their regular mathematics classes and 75% of their remediation sessions. Of



these pupils, 503 scored at or above the 16th percentile in 1977. This reduced by 29% the number of pupils scoring below the 16th percentile in 1976. The criterion stated in the objective (3%) was greatly exceeded.

Achievement was less for the remaining groups of pupils. Among the 146 pupils who attended at least 75% of their remediation sessions but less than 75% of their regular mathematics classes, 36 pupils scored at or above the 16th percentile. The reduction in number of pupils scoring below the 16th percentile in 1976 was 25%. Among the 828 pupils who attended less than 75% of their remediation sessions but at least 75% of their mathematics classes, 160 pupils raised their scores to or above the 16th percentile. Their numbers were reduced by 19%. Among the 500 pupils who attended neither remediation sessions nor their mathematics classes regularly, 62 scored at or above the 16th percentile. Their reduction was 12%. The relationship between attendance at mathematics classes and at remediation sessions was found to be related to pupil achievement for the seventh, eighth, and ninth graders.

A significant number of pupils in Comprehensive Mathematics "B" improved their scores on the Mathematics Computation section of the California Achievement Tests. Regular attendance at remediation sessions and at mathematics classes had a positive impact on pupil achievement.

Objective 3: The mathematics specialist teachers will spend 60% of their rostered time tutoring selected Title-I-eligible pupils in groups not to exceed 15, as indicated by project records and by the evaluation team's observations made with the Observational Checklist.

The objective was fully attained. For attainment of this objective, the mathematics specialists were to use at least 16 of their 28 rostered periods for remediation. The weekly schedules of 21 of the 23 specialists were submitted in October. Examination of these schedules indicated that 20 specialists had allotted at least 16-18 periods each week for remediation. One specialist had allotted 15 periods for remediation. However, all Title-I-eligible pupils who could be scheduled were served in this school.

Using the Observational Checklist, 16 specialists were interviewed. They reported using their 15-18 tutoring periods to provide remediation sessions to pupils in groups of 6-16. Because fewer than 15 pupils often attended their remediation sessions, some specialists invited more than 15 pupils to maximize their services. Attendance at the classes observed ranged from 6-14 pupils.

#### SUMMARY AND CONCLUSIONS

The Junior High/Middle School Mathematics Specialist project was established to improve the computational skills of Title-I-eligible pupils in Grades 7-9 and to provide a resource to help the teachers of these pupils improve their instructional skills in basic mathematics. The mathematics specialists scheduled remediation sessions for selected pupils attending Title I reading classes, provided staff and

curriculum development to the regular mathematics teachers of these pupils, and offered diagnoses and programs of insrruction for individual pupils.

Comprehensive Mathematics "B" was successful in improving the computational skills of Title-I-eligible pupils in Grades 7-9. Attendance at regular mathematics classes and at remediation sessions had a positive impact on pupil achievement as measured by the California Achievement Test (CAT). Among pupils who attended at least 75% of their regular mathematics classes and 75% of their remediation sessions, 29% scored at or above the 16th percentile on the Mathematics Computation section of CAT in 1977. This reduction greatly exceeded the project's goal.



TABLE I

IMPROVEMENT IN PERCENTILE RANK ON CAT COMPUTATION SECTION  
BY PUPILS IN COMPREHENSIVE MATHEMATICS "B"

| Percentage of<br>Remediation<br>Sessions<br>Attended | Pupils Who Attended at least<br>75% of Regular Math Classes |                                             | Pupils Who Attended Less than<br>75% of Regular Math Classes |                                             |
|------------------------------------------------------|-------------------------------------------------------------|---------------------------------------------|--------------------------------------------------------------|---------------------------------------------|
|                                                      | Scoring below<br>16th %ile in<br>1976                       | Scoring at or above<br>16th %ile in<br>1977 | Scoring below<br>16th %ile in<br>1976                        | Scoring at or above<br>16th %ile in<br>1977 |
| 75 or more                                           | 1,913                                                       | 563 (29%)                                   | 146                                                          | 36 (25%)                                    |
| less than 75                                         | 828                                                         | 160 (19%)                                   | 500                                                          | 62 (12%)                                    |
| Total                                                | 2,741                                                       | 723 (26%)                                   | 646                                                          | 98 (15%)                                    |

COMPREHENSIVE MATHEMATICS "C":  
SENIOR HIGH SCHOOL MATHEMATICS SPECIALISTS AND SKILL CENTERS

The Senior High School Mathematics Specialists and Skill Centers project is designed to improve the computational skills of Title-I-eligible pupils in Grades 10-12.

RATIONALE

Title I pupils in senior high schools have shown that they lack the basic mathematical skills which are necessary for everyday use and for passing entry-level examinations for employment. The mathematics programs designed for the senior high school were created to overcome this deficiency.

The 10th-grade mathematics specialist program was designed to give pupils enrolled in 10th-grade mathematics classes remedial help to improve their computational skills, and to give the teachers of these pupils ongoing assistance to meet the mathematical skill needs of their pupils. The 11th- and 12th-grade skill-center program was designed to provide individualized help to pupils requiring further remediation after their experience in the 10th-grade program.

EXPECTED OUTCOMES

Participating Title-I-eligible pupils in Grades 10-12 should be able to improve their computational skills in mathematics. Achievement should be greater for pupils who regularly attend their mathematics classes and tutorial sessions than for those with low attendance.

The pupils who are enrolled in the 10th-grade mathematics classes which use the publication "Mathematics for Today" should also gain competence in skills necessary for everyday use and for passing entry-level examinations for employment. Teachers of these pupils should become familiar with methods and activities which could be used to provide drill or individualized instruction for the pupils.

PREVIOUS FINDINGS

During 1975-1976, the first year of operation, the 10th-grade mathematics specialist program and the 11th- and 12th-grade skill-center program were fully implemented in all 11 Title I high schools. Each school was assigned a 10th-grade mathematics specialist and an 11th- and 12th-grade skill-center teacher and aide.

Both programs attained their objectives of improving computational skills of Title-I-eligible pupils. For the 10th-grade mathematics specialist program, attendance at regular mathematics classes and at remediation sessions had a significant impact on pupil achievement. Among pupils who attended at least 70% of their regular mathematics classes, the number of pupils scoring below the 18th

percentile was reduced by 28%. Improvement was greatest for pupils who had also attended at least 70% of their remediation sessions, less for pupils who had attended less than 70% of their remediation sessions, and poorest for pupils who had not been invited to remediation sessions. For the 11th- and 12th-grade skill center program, pupils who attended at least 70% of their remediation sessions showed greater improvement than pupils who attended less than 70% of their remediation sessions.

#### EVALUATION OF THE CURRENT YEAR

The current year's evaluation of the Senior High School Mathematics Specialists and Skill Centers project focused on program implementation and pupils' computational skill improvement. The evaluation team used project records, interviews, and observations of the specialists, skill-center teachers, aides, and regular classroom teachers to determine project implementation. The staff development sessions were also monitored. Pretest and posttest scores on the California Achievement Tests were used to determine pupil achievement.

#### IMPLEMENTATION

During 1976-1977, the two components of the Senior High School Mathematics project were fully implemented according to their planned mode of operation. The Division of Mathematics Education provided 10 two-hour staff development sessions to mathematics specialists, skill-center teachers, and skill-center aides during the school year. At these sessions, the project teachers and aides shared their problems and progress and learned about teaching techniques and activities for classroom use.

##### Specialists

The 10th-grade Mathematics Specialists Program was fully implemented in 12 Title I high schools. Examination of the weekly schedules, submitted in October, by 10 mathematics specialists showed that they had allotted 15 periods (80%) of their time for remediation, 7-9 periods (28-36%) for staff development, and 1-3 periods (4-12%) for diagnosing problems and prescribing instructional programs for pupils. Because of scheduling problems and changes in pupil schedules, the specialists later reported that they spent 15-16 periods for remediation, 4-10 periods for staff development, and 0-5 periods for monitoring pupil progress and diagnosing problems and prescribing programs of instruction.

In groups of no more than 15, Title-I-eligible pupils enrolled in general mathematics and Title I reading classes were selected for remediation. The number of pupils served by the specialists ranged from 82 to 225. Although most were 10th-grade pupils, 9th-, 11th-, and 12th-grade pupils enrolled in 10th-grade general mathematics courses were also served. In one school, remediation was provided daily for a period of three weeks. In the remaining 11 schools, remediation was provided weekly. Staff and curriculum development was pro-

vided through demonstration lessons in the classrooms (1-9 per week), assistance with groups of pupils in the classrooms, presentations at faculty meetings, and individual conferences with principals, teachers, and parents. In working with teachers in their schools, specialists provided assistance with use of the "Mathematics for Today" workbook, and shared methods, activities, and techniques to improve math teaching skills. In schools with new teachers, additional assistance was provided in such areas as classroom management, organization, and lesson planning.

Using the Observational Checklist, Form A, the evaluator observed the 12 specialists teach a remediation lesson. Remediation class sizes ranged from 7-15 pupils. Class attendance ranged from 2-11 pupils. Individualized instruction was provided in five classes, small-group instruction was provided in one class, and whole-group instruction was provided in six classes. Some specialists emphasized the topics of the Levels test and the "Mathematics for Today" workbook. All specialists emphasized the development of computational skills. To develop these skills, review and drill were provided with games, learning kits, worksheets, and hands-on activities. In seven schools, ongoing evaluation of pupil progress was observed.

Using the Observational Checklist, Form B, the evaluator also interviewed and observed 12 regular mathematics classes in six schools. Class sizes ranged from 16-21 pupils; class attendance ranged from 6-14 pupils. In all 12 classes, the "Mathematics for Today" workbook was used. Lecturing to the entire group was the most commonly observed teacher technique. In 10 classes, all pupils worked on the same page of the text. In two classes, individualized instruction was observed. Teachers reported providing supplemental instruction in computational skills, because their pupils lacked the skills necessary to use the text. Supplemental activities were provided through worksheets, textbooks, computer activities, workbooks, paper-and-pencil activities, and ads from newspapers.

#### Skill Centers

The 11th- and 12th-grade skill-center program was fully implemented in 11 Title I high schools. Examination of the weekly schedules submitted in October by nine skill-center teachers showed that they had allotted 21-25 periods for remediation.

In groups of no more than 15, pupils who had completed the 10th-grade mathematics program of their schools and who were rostered to Title I reading classes, were selected for remediation. The number of pupils selected at the beginning of the school year ranged from 129 to 375. In some schools, 10th-grade pupils were selected because they had completed the 10th-grade mathematics program. Because of changes in pupil schedules, the number of pupils served varied during the year. In one school, remediation was provided daily for a period of three weeks. In the remaining 10 schools, remediation was provided weekly.



Using the Observational Checklist, Form A, the evaluator interviewed the 11 skill-center teachers and observed them teach a remediation lesson. Class enrollment ranged from 6 to 15 pupils; class attendance ranged from 1 to 9 pupils. Nine teachers provided individualized instruction; two teachers instructed the entire class on common areas of weaknesses. All emphasized the development of computational skills. Review, drill, and follow-up activities were provided through games, learning kits, worksheets, hands-on activities, and paper-and-pencil activities. Ongoing evaluation of pupil progress was observed in four classes. Skill-center aides were observed performing clerical work, marking papers, filling in records, storing and organizing instructional materials, and assisting individual pupils.

#### ATTAINMENT OF OBJECTIVES

##### Specialists

Objective 1: Participating pupils in 10th-grade mathematics classes who attended at least 70% of the regular 10th-grade mathematics classes and at least 70% of the scheduled remediation sessions will improve their mathematics skills to the extent that between February 1976 and February 1977, the percentage of pupils scoring below the 16th percentile on the Mathematics Computation section of the California Achievement Tests will be reduced by three percentage points.

The objective was fully attained. The Mathematics Computation section of the California Achievement Tests (CAT) was administered to pupils in Title I schools in February 1977.

The records of 2,341 pupils in Grades 9-12 selected by the mathematics specialists for remediation were examined. Attendance at remediation sessions and at regular mathematics classes until April 29 were recorded for all selected pupils to determine the effect of attendance on achievement. The number of remediation sessions offered ranged from 3-36 sessions. Because pupils transferred, dropped out, or had missing test results, 1,207 records could not be analyzed. Pupil achievement between February 1976 and February 1977 was determined from the records of 1,134 pupils who had scored below the 16th percentile in 1976.

Overall, a significant number of pupils improved their computational skills. Of the 1,134 pupils who had been invited to remediation sessions, 14% raised their CAT scores to or above the 16th percentile in 1977.

As shown in Table 1, pupil achievement was related to attendance at regular mathematics classes and at remediation sessions. Among the 379 pupils who attended at least 70% of their regular mathematics classes and 70% of their remediation sessions, 88 scored at or above the 16th percentile. This reduced by 23% the number of pupils scoring below the 16th percentile. The expected percentage was greatly exceeded.

Among the 444 pupils who attended at least 70% of their regular mathematics classes but less than 70% of their remediation sessions, the number of pupils scoring below the 16th percentile was reduced by 13%. The same percentage of reduction was achieved among the 23 pupils who attended less than 70% of their regular mathematics classes but more than 70% of their remediation sessions. The smallest reduction, 3%, was demonstrated by the 288 pupils who attended neither mathematics classes nor remediation sessions on a regular basis.

The Specialist program was successful in improving the computational skills of pupils enrolled in Title I 10th-grade mathematics classes. Improvement was greatest among pupils who attended both mathematics classes and remediation sessions on a regular basis.

Objective 2: Tenth-grade mathematics specialist teachers will spend 15 periods per week tutoring selected Title-I-eligible pupils as indicated by project records and by the evaluation team's observations made with the Observational Checklist.

The objective was fully attained. As stated in the implementation section, project records and evaluator's observations with the Observational Checklist both indicated full compliance with the planned mode of operation. Examination of the weekly schedules of 10 of the 12 mathematics specialists, submitted in October, showed that they had allotted 15 periods (60%) of their rostered time for remediation. Interviews with all mathematics specialists indicated that they were using 15-16 periods each week to provide remediation to small groups of pupils. They also provided staff development to the teachers of Title-I-eligible pupils, diagnosed pupil problems, and prescribed programs of instruction for individual pupils.

Objective 3: Selected Title-I-eligible pupils will be scheduled to a minimum of one tutoring period each week in groups not to exceed 15, as indicated by project records and by the evaluation team's observations made with the Observational Checklist.

The objective was fully attained. Records used to determine the attainment of Objective 2 were also examined for this objective. Title-I-eligible pupils enrolled in general mathematics and Title I reading classes were selected for remediation in groups of no more than 15. Interviews with all 12 mathematics specialists indicated that remediation was offered at least once a week to pupils in groups of 2 to 15. Attendance at the sessions observed ranged from 2 to 11 pupils.

#### Skill Centers

Objective 4: Participating pupils in the 11th and 12th grades who attended at least 70% of the scheduled remediation sessions will improve their mathematics skills to the extent that between February 1976 and February 1977, the percentage of pupils scoring below the 16th percentile on the Mathematics Computation

section of the California Achievement Tests will be reduced by three percentage points.

The objective was fully attained. The Mathematics Computation section of the California Achievement Tests (CAT) was administered to pupils in Title I schools in February, 1977.

The records of 2,868 pupils in Grades 10-12 who had been selected for remediation sessions until April 29 were recorded for all pupils who had been selected to determine the effect of attendance on achievement. The number of remediation sessions offered ranged from 8-32 sessions. Data from 1,371 pupils could not be utilized because of transfer, dropout, or missing test results. Pupil achievement between February 1976 and February 1977 was determined from the records of 1,497 pupils who had scored below the 16th percentile in 1976.

Overall, a significant number of pupils improved their computational skills. Of the 1,497 pupils who had been invited to remediation sessions, 15% scored at or above the 16th percentile in 1977.

As shown in Table 2, pupil achievement was related to attendance at remediation sessions. Among the 714 pupils who attended at least 70% of their remediation sessions, 159 brought their CAT scores to or above the 16th percentile. This reduced by 22% the number of pupils scoring below the 16th percentile in 1976. The expected percentage was greatly exceeded.

Among the 783 pupils who attended less than 70% of their remediation sessions, 63 scored at or above the 16th percentile in 1977. Their numbers were reduced by 8%. Regular attendance at remediation sessions had a positive impact on computational skill improvement.

Objective 5: The Mathematics Skill-Center teachers will spend 25 periods per week tutoring selected Title-I-eligible pupils as indicated by project records and by the evaluation team's observations made with the Observational Checklist.

The objective was fully attained. As stated in the implementation section, project records and evaluator's observations with the Observational Checklist indicated full compliance with the planned mode of operation. The weekly schedules of nine of the 11 skill-center teachers, submitted in October, were examined. Interviews with the 11 skill-center teachers indicated that 10 were using 25 periods each week to provide remediation to small groups of pupils. All eligible pupils who could be scheduled, were served in the one school, which provided 21 periods of remediation each week.

Objective 6: Selected Title-I-eligible pupils will be scheduled to a minimum of one tutoring period each week in groups not to exceed 15, as indicated by project records and by the evaluation team's observations made with the Observational Checklist.

The objective was fully attained. The records used to determine the attainment of Objective 5 were also examined for this objective. Title-I-eligible pupils who had completed the 10th-grade general mathematics course and who were enrolled in Title I reading classes were selected for remediation in groups of no more than 15. Interviews with the 11 teachers indicated that remediation was offered at least once a week to pupils in groups of 2-15. Attendance at the sessions observed ranged from 1-9 pupils.

#### SUMMARY AND CONCLUSIONS

The Senior High School Mathematics project was established to improve the computational skills of Title-I-eligible pupils in Grades 9-12 and to provide the 10th-grade mathematics teachers of these pupils with assistance to meet their pupils' instructional needs.

Both programs were fully implemented in all Title I high schools. The mathematics specialists assisted the regular mathematics teachers with diagnoses of pupil problems and with programs of instruction. They also used at least 15 periods of their teaching week to provide remediation sessions to selected pupils in groups of no more than 15.

The skill-center teachers provided 21-25 periods of remediation, in groups of no more than 15, to Title-I-eligible pupils who had completed the 10th-grade mathematics program. The skill-center aides were observed performing clerical work, marking papers, filling in records, storing and organizing instructional materials, and assisting individual pupils.

Both programs helped Title-I-eligible pupils improve their computational skills. For the 10th-grade mathematics specialist program, attendance at regular mathematics classes and at remediation sessions had a positive impact on pupil achievement. A 23% reduction in number of scores below the 16th percentile was achieved by pupils who attended their mathematics classes and remediation sessions regularly. Pupils who attended their mathematics classes regularly but who had not attended their remediation sessions on a regular basis demonstrated a 13% reduction in number. A similar reduction was demonstrated by pupils who did not attend their mathematics classes regularly, but who did attend their remediation session on a regular basis. The pupils who attended neither their remediation sessions nor regular mathematics classes regularly demonstrated a reduction of only 3%.

For the skill-centers program, pupils who attended their remediation sessions regularly achieved a 22% reduction in the number scoring below the 16th percentile. Pupils who did not attend regularly demonstrated a reduction of 8%. For both mathematics programs, attendance at remediation sessions had a positive impact on pupil achievement.



TABLE 1

IMPROVEMENT IN PERCENTILE RANK ON CAT COMPUTATION SECTION  
BY PUPILS IN COMPREHENSIVE MATHEMATICS "C"  
(10th-GRADE MATHEMATICS SPECIALISTS)

| Remediation<br>Sessions<br>Attended | Pupils Who Attended At Least<br>70% of Regular Math Classes |                                          | Pupils Who Attended Less than<br>70% of Regular Math Classes |                                          |
|-------------------------------------|-------------------------------------------------------------|------------------------------------------|--------------------------------------------------------------|------------------------------------------|
|                                     | Scoring below<br>16th %ile in 1976                          | Scoring at or above<br>16th %ile in 1977 | Scoring below<br>16th %ile in 1976                           | Scoring at or above<br>16th %ile in 1977 |
| 70% or More                         | 379 (100%)                                                  | 88 (23%)                                 | 23 (100%)                                                    | 3 (13%)                                  |
| Less than 70%                       | 444 (100%)                                                  | 58 (13%)                                 | 288 (100%)                                                   | 10 ( 3%)                                 |
| Total                               | 823 (100%)                                                  | 146 (18%)                                | 311 (100%)                                                   | 13 ( 4%)                                 |

TABLE 2

IMPROVEMENT IN PERCENTILE RANK ON CAT COMPUTATION SECTION  
BY PUPILS IN COMPREHENSIVE MATHEMATICS "C"  
(SKILL CENTERS)

| Remediation<br>Sessions Attended | Pupils Scoring below<br>16th %ile in 1976 |        | Pupils Scoring at or above<br>16th %ile in 1977 |       |
|----------------------------------|-------------------------------------------|--------|-------------------------------------------------|-------|
| 70% or more                      | 714                                       | (100%) | 159                                             | (22%) |
| Less than 70%                    | 783                                       | (100%) | 63                                              | ( 8%) |
| Total                            | 1,497                                     | (100%) | 222                                             | (15%) |

## COMPREHENSIVE MATHEMATICS "D": ACTIVITY-CENTERED MATHEMATICS FOR RETARDED EDUCABLE CHILDREN

The Activity-Centered Mathematics for Retarded Educable Children project is designed to give teachers of retarded educable pupils training and assistance in the teaching of mathematics which emphasizes individualized instruction, hands-on activities, and innovative materials.

### RATIONALE

Retarded educable children need not a watered-down version of the mathematics program for average children, but a carefully delineated and sequential program which allows them to work with concrete materials and hands-on activities which are geared to their level of understanding.

The Activity-Centered Mathematics for Retarded Educable Children project was designed to provide materials and training for teachers to enable them to offer a program which would meet their pupils' needs and foster the pupils' mathematical skill development.

### EXPECTED OUTCOMES

The pupils of the project teachers should improve their basic mathematical skills. The teachers should become familiar with methods, materials, and activities which they can use in their daily instructional program. They should also develop or maintain a positive attitude toward the teaching of mathematics.

### PREVIOUS FINDINGS

During the project's initial year (1972-1973), pupils aged 9-12 in classrooms involved in activities using concrete materials showed significantly greater gains on the Individual Arithmetic Test for Educable Mentally Retarded Children than children in classrooms not using this approach. Teacher attitude toward mathematics remained positive throughout the year.

Between 1973 and 1975, significant pupil progress was shown on the KeyMath Diagnostic Arithmetic Test. Results of the Yoa-Ayrer-Tobin (YAT) Attitude-Toward-Mathematics Scale administered in 1974-1975 showed that project teachers had maintained their positive attitudes toward mathematics during the school year.

During the 1975-1976 school year, pupils of project teachers demonstrated twice the expected rate of improvement on the KeyMath Diagnostic Arithmetic Test. Pupils aged 5-12 showed greater gains than pupils aged 13-16. Participating teachers improved or maintained their positive attitude toward the teaching of mathematics.

## EVALUATION OF THE CURRENT YEAR

The current year's evaluation of the Activity-Centered Mathematics for Retarded Educable Children project focused on pupil progress in mathematics and teacher attitude toward the teaching of mathematics. Project records, teacher interviews, and classroom observations were used to determine program implementation. Pretest and posttest scores of the children taught by project teachers were used to determine gains in pupil achievement. A pretest-posttest design was also used to determine changes in the attitudes of the teachers toward mathematics instruction.

### IMPLEMENTATION

During 1976-1977, the project was fully implemented according to plan. Of 42 teachers who had been previous participants and who had requested service for the current year, 21 were selected for active participation. The project coordinator provided intensive service (21-25 visits each) to 11 of these teachers and less intensive service (5-8 visits each) to the other 10 teachers. The coordinator was available to assist, when requested, 21 teachers not selected for active participation. Service was provided through classroom demonstrations, observations, loan of resource materials, training in classroom management techniques, instruction in the use of materials, and testing of pupils. Individual conferences with teachers were held for the purpose of providing diagnoses and prescriptions for individual pupils.

In previous years, an intensive program of staff development in teaching techniques, activities, and use of hands-on materials was provided to teachers during the summer. Additional staff development sessions were held monthly during the school year. At these sessions, the teachers shared their ideas and experiences, listened to guest speakers, received training in methods and activities to individualize instruction, and learned to use and interpret instruments for measuring pupil progress. During the current year, all staff development sessions were eliminated from the project.

Using the Observational Checklist, the evaluator interviewed and observed, for one class period, seven teachers who had received intensive service and three teachers who had received less intensive service. Class sizes ranged from 7 to 18 pupils; attendance ranged from 6 to 14 pupils.

Grouping procedures varied widely. In five schools, the entire class worked as a group on the same teacher-selected activity. In four schools, teachers combined entire-class instruction with individualized and/or group instruction. Group instruction was observed in one school.

In general, teachers were providing instruction in basic mathematical skills through an activity-oriented teaching approach. In one school, the teacher

focused entirely on an activity-centered approach. In seven schools, this approach was combined with lecturing and/or presentation of written work. Lecturing to pupils and presentation of written work were observed in the remaining two schools.

Teachers emphasized the development and reinforcement of facts through the use of games, worksheets, workbooks, blackboard activities, hands-on activities, pencil-and-paper activities, and listening activities. No changes to three changes in activities were observed during the class period observed.

#### ATTAINMENT OF OBJECTIVES

Objective 1: Pupils of teachers who receive regular service from the project will improve their mathematics skills to the extent that they will achieve a median gain at the rate of five months in total grade-equivalent (GE) score on the KeyMath Diagnostic Arithmetic Test during a 10-month school year.

The objective was fully attained. The KeyMath Diagnostic Arithmetic Test was administered in October 1976 and May 1977 to 192 pupils taught by 21 project teachers. During the year, 13 pupils entered regular class, 29 transferred to other schools or special education classes, and 11 were not tested.

The median gain in total grade equivalent (GE) score was 0.5 (5 months) in the seven months between pretest and posttest. Extrapolated for a 10-month school year, the median gain was 0.7 GE (7 months). This exceeded the expected rate of achievement.

As shown in Table 1, 23 (12%) of the 192 pupils demonstrated a loss or "no change" in GE. Overall, pupils in elementary-retarded educable (REE) classes demonstrated more growth than pupils in secondary-retarded educable (RES) classes. Achievement among the 160 pupils in REE classes ranged from 0.2-3.3 GE; their median gain was  $6\frac{1}{2}$  months. Achievement among the 32 pupils in RES classes ranged from 0.1-1.7 GE; their median gain was 3 months.

The 60 REE pupils of teachers who received intensive service from the project coordinator demonstrated more progress (7 months) than the 100 pupils of teachers who received less intensive service (5 months). However, the 24 RES pupils of this first group of teachers demonstrated less progress (3 months) than the 8 pupils of the second group of teachers ( $8\frac{1}{2}$  months).

In general, the project was successful in improving the basic mathematical skills of pupils as measured by the KeyMath Diagnostic Arithmetic Test. Pupils in REE classes were able to demonstrate more growth than pupils in RES classes.

Objective 2: At least 50% of the participating teachers will maintain or improve their attitudes toward the teaching of mathematics as measured by the Yoa-Ayrer-Tobin (YAT) Attitude-Toward-Mathematics Scale administered in the fall and spring.



The objective was fully attained. The Yoa-Ayrer-Tobin (YAT) Attitude-Toward-Mathematics Scale was administered to project participants in October 1976 and May 1977. Eleven (52%) of the 21 participants improved or maintained their positive attitudes toward the teaching of mathematics.

#### SUMMARY AND CONCLUSIONS

Comprehensive Mathematics "D" was fully implemented and successful in improving the basic mathematical skills of retarded educable pupils aged 5 to 17. Observations indicated that the teachers were providing basic-mathematical skill instruction using an activity-oriented teaching approach. During the current year, staff development sessions were eliminated from the project. This change in project operation may have had a negative impact on pupil achievement and teacher attitudes although project goals were attained.

Pupils demonstrated a median gain of 0.5 in total GE score on the KeyMath Diagnostic Arithmetic Test in the seven months between pretest and posttest. Extrapolated for a 10-month school year, the median gain was 0.7 GE. Pupils in elementary-retarded educable classes demonstrated a greater rate of progress than pupils in secondary-retarded educable classes.

Participating teachers improved or maintained their positive attitudes toward the teaching of mathematics as measured by the Yoa-Ayrer-Tobin (YAT) Attitude-Toward-Mathematics Scale.

TABLE 1

CHANGE IN KEYMATH DIAGNOSTIC ARITHMETIC TEST SCORES  
BETWEEN OCTOBER 1976 AND MAY 1977 BY PUPILS OF  
COMPREHENSIVE MATHEMATICS "D" PARTICIPANTS

| Change in<br>GE Score | Total No.<br>of Pupils | No. of Pupils<br>in REE Classes | No. of Pupils<br>in RES Classes |
|-----------------------|------------------------|---------------------------------|---------------------------------|
| 1.1 or more           | 37 ( 19%)              | 32 ( 20%)                       | 5 ( 16%)                        |
| 0.6-1.0               | 60 ( 31%)              | 54 ( 34%)                       | 6 ( 19%)                        |
| 0.1-0.5               | 72 ( 38%)              | 54 ( 34%)                       | 18 ( 56%)                       |
| Loss or No Change     | 23 ( 12%)              | 20 ( 12%)                       | 3 ( 9%)                         |
| Total                 | 192 (100%)             | 160 (100%)                      | 32 (100%)                       |

AIDE SERVICES  
(A Component of the COMPREHENSIVE READING PROJECT)

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

Aide Services projects have been grouped together because of their common focus on the services of paraprofessionals to Title I pupils and their teachers: ("A") K-3 Aides, and ("B") Parent Aides. The composite project provides aides in classrooms to increase the adult/pupil ratio and to facilitate individualization of instruction in reading and/or mathematics.

RATIONALE

Each of these Aide Services projects provides training and experience to enable aides to assist teachers and to work with individuals or groups of Title-I-eligible children as tutors, resource persons, and assistants. Emphasis is placed on improving the participating pupils' basic skills, especially in reading. Aides' participation in the educational process allows teachers to plan instruction around individual and group needs and permits more individualized attention to specific needs of the participating eligible children.

("A") K-3 Aides: Title I pupils score below national norms in reading on standardized tests. These pupils need more individualization of instruction because of learning deficiencies.

Teachers with Title I pupils in large classes need supportive assistance if they are to give more attention to individuals and small groups of pupils. Aides provide this supportive assistance by helping the teachers with their individual and small-group instruction and by further relieving them of some routine clerical and house-keeping tasks. The presence of another adult in the classroom not only increases the adult/pupil ratio (promoting greater flexibility in grouping and in differentiation of instruction) but also permits greater social interaction between pupils and adults.

("B") Parent Aides: The introduction of large numbers of trained parent aides into urban classrooms represents a major structural change in American education. The project has profound implications for classroom organization, for pupil learning, for school-community relations, and for the changing role of the teaching profession. With respect to classroom organization, the addition of another adult can allow greater flexibility in grouping procedures and in differentiation of levels of instruction. The expected increase in individualized instruction can improve pupil achievement. The need for increased communication between the community and the school can be satisfied through the direct involvement of parents from the community in the educational program.

## EXPECTED OUTCOMES

("A") K-3 Aides: With aides helping their teachers, children are expected to have more beneficial learning experiences, more personal supervision and reinforcement, and more rapid feedback. The aides can be available to stimulate and encourage the pupils spontaneously or upon request. Because individual and small-group learning and a wider range of activities are more feasible in classrooms with aides than in classrooms where the teacher is working alone, the teacher/aide teams can provide Title I pupils a classroom learning environment suitable to the pupils' varying needs.

Use of aides who live in the school neighborhood is expected to encourage a direct and readily understood line of communication between adults and pupils. The aides can help the children adjust to their school situations and can interpret some aspects of the children's classroom behavior to the teachers.

("B") Parent Aides: With an increased amount of individualized instruction, the teacher can alleviate pupils' diagnosed reading and mathematics weaknesses.

## PREVIOUS FINDINGS

("A") K-3 Aides: In the project's early years, it was found that by reducing the number of noninstructional tasks the teachers performed, aides increased the amount of time available for individualized and small-group instruction. Individualization of instruction was facilitated when teachers used aides for instructional tasks but not when the aides performed noninstructional tasks.

In the four years, 1969-1973, the Kindergarten Aides project operated more efficiently than the Classroom Aides project (Grades 1-3) because kindergarten aides had the guidance of a project director and were assigned only to kindergartens. Inconsistent use of classroom aides within the schools and the lack of a designated project director tended to handicap the Classroom Aides project.

During the last three years of operation, 1973-1976, teachers with aides devoted more time to individual and small-group instruction, especially in reading. Teachers with aides also had less frequent discipline incidents than teachers without aides. The great majority of aides, who consistently served three or fewer classes a week, spent an average of approximately 2/3 of their time in supervising and/or tutoring individuals or small groups, approximately 1/6 of their time in clerical duties, and approximately 1/6 of their time in such activities as class trips, operation of audiovisual equipment, and housekeeping tasks.

("B") Parent Aides: Each year's evaluative findings since 1968-1969 have been generally positive. Aides have indicated satisfaction with their staff-development (in service education) sessions as sources of useful ideas applicable



to their work with pupils. Observation visits by evaluators have revealed the expected degrees of pupil grouping and instructional differentiation, and appropriate tasks being performed by the aides. Principals and teachers have repeatedly praised the parent aides' effectiveness in individualizing the school's instructional program. In a 1975-1976 survey conducted by the Coordinator of Nonpublic School Projects, the Parent Aides program received the highest ratings from the principals of eligible schools as the most effective Title I project.

#### EVALUATION OF THE CURRENT YEAR

("A") K-3 Aides: The current year's evaluation focused on the degree to which individual and small-group instruction of participating Title-I-eligible children was enhanced by the provision of aides to classroom teachers. The assessment was based on observations and interviews with aides and teachers.

("B") Parent Aides: The evaluation included formal observation of project classrooms to determine the degree to which teachers individualized their instructional program with parent-aide assistance.

#### IMPLEMENTATION

##### ("A") K-3 Aides

In 1976-1977 the project included 30 kindergarten aides and 27 aides in Grades 1-3 working with Title-I-eligible pupils in the public schools.

The evaluation of kindergarten aides included individual observations of and interviews with 14 randomly selected aides and interviews with their associated teachers. Evaluation data on aides in grades one to three were gathered from observations of and interviews with 23 randomly selected aides and interviews with their associated teachers. The aides spent most of their time providing instructional, physical, and socio-emotional services to individuals and small groups of Title I pupils, mainly in reading and mathematics. Most kindergarten aides worked with four classes each week, while most aides in grades one to three served two to three classes per week.

Although patterns of aide utilization varied in Grades K-3, it was common for kindergarten aides to work with one teacher in the morning and another in the afternoon. Aides in grades 1-3 usually alternated working with different teachers (and their classes) on different days for whole day sessions. The K-3 aides were observed performing instructional and noninstructional tasks compatible with the project's objectives.

The 47 teachers with K-3 aides interviewed by the evaluator found no drawbacks in having an aide in their classrooms. Most teachers reported that the aides, because of years of experienced service, had become nearly indispensable to them. In fact, when aide time had been reduced because of budget cuts, teachers reported the learning rates of their pupils dropped significantly. This was especially noted by kindergarten teachers.

Forty-five of the 47 teachers interviewed indicated that the aides' most valuable assistance was reinforcing teacher-taught reading or mathematics skills with individuals or small groups of pupils. The teachers were then free to work without interruption with more advanced pupils. Teachers also reported the socio-emotional and physical service provided to the disadvantaged pupils provided a base for cognitive learning.

Kindergarten aides received consultative and staff-development services provided by district kindergarten supervisors. Aides in grades one to three were assisted by an ongoing staff-development program, which included 18 periodic visits by the training coordinator and eight workshops covering the areas of math and reading instructional methods and materials, and affective education techniques.

#### ("B") Parent Aides

During 1976-1977, parent aides provided services to Title-I-eligible pupils in nonpublic schools, in a manner generally consistent with the Title I Application.

The project had 220 aide positions this year. All but 19 of the employed aides had previous experience in the project, and most of those 19 had formerly served as volunteer aides at the nonpublic schools their children attended. Their current employment for four hours a day, five days a week, provided a continuity of service that was not characteristic of unpaid volunteers. The number of aides per school ranged from 2 to 8.

Each school's aides received supportive service from one of the project's three consulting supervisors, who conducted initial orientation for new aides, in-service group sessions in October, December, January, March, and May for all aides, and supportive observations and conferences wherever appropriate. The supervisors were available also for occasional consultations at five other sites where aides were employed by other Title I projects.

Although the pupils served by this project ranged from prekindergarten to Grade 9, most of the parent aides were assigned to Grades 1-3. Some aides worked with small groups or individual pupils in the regular classroom; others took their small groups or individuals to a separate location, such as a vacant

classroom, a special-purpose room, a corner of the cafeteria, or a corridor area. Some aides were assigned to help one grade in more than one basic skill subject; others concentrated on one subject (reading or mathematics) with pupils from more than one grade.

One school with two classes per grade achieved noteworthy flexibility in grouping by scheduling three aides to work in the same subject with the same grade at the same time while the two teachers of the grade remained with their more advanced pupils. The Title I pupils from both classrooms were distributed among the three aides according to their respective degrees or types of need and could be easily regrouped as their needs changed.

During instruction in reading, parent aides performed such tasks as helping in language-arts drills, supervising pupils' completion of assigned activities, scoring work sheets, directing reading games, reading stories aloud, and helping to develop manipulable aids to learning.

During instruction in mathematics, aides at the schools using the Individually Prescribed Instruction ("IPI") program scored work sheets, supervised pupils' self-tests, summarized their progress, and conferred with pupils about their work-sheet difficulties. In non-IPI mathematics classes, aides conducted drills, directed mathematical games, scored work sheets, and helped to prepare work sheets and other learning aids.

A member of the evaluation team visited 29 of the project's 49 participating schools, conferring with principals, teachers, and aides, and systematically observing the activities of both pupils with an aide and pupils remaining with their teacher while the aide worked with their classmates elsewhere. The evaluator noted the diligence and devotion of the aides and heard enthusiastic comments made by their teachers and principals.

## ATTAINMENT OF OBJECTIVES

### ("A") K-3 Aides

Objective 1: Efficient use of the aides' time will be maintained by the teachers so that aides will spend (a) at least 60% of their time providing instructional, physical, or socio-emotional services to individuals (one or two children) or small groups (from three to seven children), (b) not more than 20% of their time in clerical tasks (e.g., grading, record keeping), and (c) not more than 20% of their time in such tasks as housekeeping and other activities. This will be verified by observations made by members of the evaluation team using the Observational Checklist and interviews with aides and teachers.

This objective was fully attained.

Data were tabulated from the locally developed Aides Observational Checklist. The Checklist covered four kinds of Aide Activity and Behaviors:

A. Service to pupils (instructional, physical, socio-emotional, etc);  
B. Clerical (record keeping, etc.); C. Housekeeping (cleaning/straightening, etc.), and D. Other. The data were gathered from observations of 14 kindergarten aides and 23 aides in Grades 1-3.

Overall, kindergarten and classroom (Grades 1-3) aides spent an average of 91% of their time providing instructional, physical, or socio-emotional services to individuals or small groups of children, 3% of their time in clerical tasks, and 6% of their time in housekeeping tasks and other activities. Although only slight variations (differences of 1%) were noted in the amounts of time kindergarten and classroom aides spent on clerical, housekeeping and other activities, each group provided the same amount of time in direct services to pupils (91%).

Objective 2: Aides in Grades 1-3 will be assigned to work with not more than three classes each week and kindergarten aides will be assigned to four classes each week as indicated by observations by the evaluation team using the Observational Checklist.

This objective was considered attained.

One hundred percent of the kindergarten aides observed were assigned to work with not more than four classes each week, completely meeting the objective.

Ninety-one percent of the classroom aides observed met the objective by being assigned to work with not more than three classes. Nine percent (or 2 aides at one school) served four classes. Project staff acted to correct these cases.

#### ("B") Parent Aides

Objective 3: During the school year, the presence of parent school aides in classrooms of participating schools will facilitate small-group and individualized instruction of Title-I-eligible pupils in basic academic skill areas (reading, language arts, mathematics) as determined by systematic observations of parent-aide classrooms by an evaluation team using the Learning Environment Checklist. The following will be expected: (a) with respect to classroom grouping arrangements, pupils will be working in small groups (2-10 pupils) and/or as individuals during at least 60% of observed time; (b) with respect to the level of instructional differentiation, in less than 10% of observed time will all pupils be working on the same assignment; (c) with respect to the role of the teacher, in at least 20% of observed time teachers will be actively guiding and/or assisting groups or individuals; (d) with respect to the activities of the aides, at least 15% of observed time will be devoted to supervising and/or assisting individual pupils.



This objective was fully attained.

Twelve of the participating nonpublic schools were randomly selected as a sample for specific observation--four from the jurisdiction of each consulting supervisor. Of the 12 schools, two had less than 4 aides, two had more than 5 aides, two had aides in their first year as site coordinators, two had a large proportion of Spanish-speaking pupils, one was a special education school, one had been in a similar sample of schools the previous year, none used aides in an IPI mathematics program, and none was in its first year of project participation. Each supervisor agreed that the four selected schools fairly represented the 15 to 18 schools in her jurisdiction.

A member of the evaluation team visited the 12 schools and systematically observed the 52 classes that had aide service. Observed conditions pertinent to the objective were noted on a Learning Environment Checklist--one per "aide unit" (one aide, her pupils, and their teacher and classmates). At least four such notations per unit were made at intervals of at least five minutes, but not in a single 20-minute session.

Of the 52 observed aides, 14 were working in the classroom with a teacher and 38 were working elsewhere in the school building. If an aide was working outside the classroom, corresponding observations of conditions in the classroom also were made (except in four instances where the end of a class period occurred before both groups could be observed). If an aide was serving the pupils of two teachers simultaneously, both classes were observed.

To compensate for any variations in observation time, the proportion of time in which each expected condition was observed to exist was computed on a "per aide unit" basis. The proportions for all observed aide units were then averaged; each average so derived was compared with the proportion of time specified in the objective.

Results of the computations are shown in Table 1. The criterion percentages were surpassed in both settings--aides working in the classroom and aides working elsewhere. The difference between settings was most notable in respect to the percentage of time the aide was observed working with individual pupils: in the classroom it was 64%; elsewhere it was 47%.

#### SUMMARY AND CONCLUSIONS

Both components of the Aide Services project -- K-3 Aides and Parent Aides -- were fully implemented in accordance with their planned modes of operation. All three objectives, mostly emphasizing direct, meaningful service to individuals and groups of pupils, were attained.

Evaluators' observations and interviews (formal and informal) with teachers and principals indicated that the aides greatly enhanced the learning process by facilitating individualized and small-group instruction in basic skills. Statements by teachers and principals indicated that the services of the aides were highly regarded.

Aides in both public and nonpublic schools were observed to spend most of their time providing direct services, including instructional activities, to Title-I-eligible pupils. Beyond their direct assistance to each pupil, aides enabled teachers to give more individualized attention to pupils in smaller groups, to avoid assigning the same learning activity to the entire class, and to encourage pupils to work independently as individuals or in small groups.

Teachers and administrators found aides to be of great help to them and their classes because of the aides' professionalism, experience, and responsible work habits.

TABLE 1

## CONDITIONS OBSERVED IN 12 NONPUBLIC SCHOOLS HAVING PARENT AIDES

| Desired Condition<br>per Objective 3                                                                                    | Aides Working<br>Primarily or Only<br>in Classroom |                                       | Aides Working<br>Primarily or Only<br>Elsewhere |                                       | All Aides                  |                                       |
|-------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|---------------------------------------|-------------------------------------------------|---------------------------------------|----------------------------|---------------------------------------|
|                                                                                                                         | Aide<br>Units*<br>Observed                         | % of Time<br>Condition<br>Was Present | Aide<br>Units*<br>Observed                      | % of Time<br>Condition<br>Was Present | Aide<br>Units*<br>Observed | % of Time<br>Condition<br>Was Present |
| a. <u>Grouping of Pupils:</u><br>Pupils working individually<br>or in groups of 2-10<br>(At least 60% desired)          | 14                                                 | 88%                                   | 34                                              | 79%                                   | 48                         | 81%                                   |
| b. <u>Instructional Differentiation:</u><br>Pupils not all working on<br>the same assignment<br>(More than 90% desired) | 14                                                 | 91%                                   | 38                                              | 97%**                                 | 52                         | 95%                                   |
| c. <u>Teacher's Role:</u><br>Working directly with less<br>than half the class<br>(At least 20% desired)                | 14                                                 | 74%                                   | 34                                              | 74%                                   | 48                         | 74%                                   |
| d. <u>Aide's Activities:</u><br>Working with individual<br>pupils<br>(At least 15% desired)                             | 14                                                 | 64%                                   | 38                                              | 47%                                   | 52                         | 52%                                   |

\*An aide unit includes one aide, her pupils, and their teacher and classmates. In four instances when the aide was observed "elsewhere," the class period ended before the corresponding classroom could be observed. Time percentages are averages per observed unit.

\*\*The 3% exceptions were during the infrequent occasions when an aide who worked primarily elsewhere was in the classroom.

IMPROVEMENT OF READING SKILLS "A"  
(A Component of the COMPREHENSIVE READING PROJECT)

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

Individualized instruction for seriously deficient readers is provided through the use of prescribed materials in a Reading Skills Center staffed with reading teachers assisted by aides.

RATIONALE

Citywide testing over the past few years has indicated that children in Grades 3-7 have serious deficiencies in reading comprehension and vocabulary skills. Diagnosis and correction of these children's serious reading deficiencies prior to their entry into secondary schools are critical to the future cognitive attainment of these children. Since these children have a history of low success in conventional classrooms, specialized assistance is required.

EXPECTED OUTCOMES

It is expected that pupils attending three or more periods per week will show measurable improvement in phonics, decoding, vocabulary, and comprehension skills.

PREVIOUS FINDINGS

Since the project's initiation in 1966, pupils have shown improvement in comprehension, word-attack, and phonics skills. In 1970-1971, standardized tests indicated that project pupils' low scores in vocabulary were reversed after two years, and low scores in comprehension were reversed after one year. During the following years pupils continued to improve their basic reading skills in phonics and comprehension.

EVALUATION OF THE CURRENT YEAR

The current evaluation of Improvement of Reading Skills "A" involved observations, interviews, and analysis of test results. Score gains from pretest to posttest in phonics and reading comprehension were compared with project criteria.



## IMPLEMENTATION

In 1976-1977, the project's intended mode of operation was fully implemented.

Pupils were provided with an individualized, diagnostic-prescriptive reading program. The project's primary focus was on those pupils with the most severe reading problems. The evaluation team, using an observational checklist, completed 17 observations of the 14 reading centers.

Most centers were staffed with one full-time and one half-time aide to assist the reading teacher in the preparation for instruction, in the follow-up of each pupil's progress, and in reviewing work with pupils. During 16 of the 17 observations teachers were observed working with individual or small groups of children. Aides were observed spending 82% of their time assisting individual or small groups of children; 15% of their time was devoted to clerical tasks; and 3% of their time in observing the reading teacher or instructing a student teacher in the use of audiovisual equipment. Aides were never observed performing housekeeping tasks.

No less than two types of materials were observed being used during lessons, and three or more kinds or levels of materials were used during 16 of the 17 observations. Pupils assigned work for each period was comprised of two to four activities in the areas of reading which included comprehension, word-attack, study skills, or literature. Each pupil was given a prescription of tasks to do which included use of reading books, workbooks, listening centers, games, or library corners. Pupils tended to work diligently on their assigned tasks, which were changed daily. The average number of pupils observed attending during an instructional period was 16.

The project teachers submitted 1,432 records of pupils in Grades 3-7. Of these, 6% were in Grade 3, 34% in Grade 4, 35% in Grade 5, 24% in Grade 6, and 1% in Grade 7.

The project's program coordinator provided on-site assistance to the reading teachers and staff development for both the reading teachers and their aides.

## ATTAINMENT OF OBJECTIVES

Objective 1: Pupils participating in this project three or more times a week during the school year will improve their vocabulary/comprehension skills as indicated by Fall and Spring administration of Informal Reading Inventories (IRI). A minimum of 75% of the group will gain one book level and 55% will gain two book levels.

This objective was partially attained.

Pupils enrolled in the project were pretested in September and posttested in May by reading teachers using informal reading inventories. Only those 1,315

pupils who attended at least three times a week and had both pairs of scores were included. Of these pupils, 77% gained at least one book level based on the IRI instructional reading level criterion of the informal reading inventory. A gain of two or more book levels was attained by 46% of the pupils. Twenty-two percent of the participating pupils made no gain. Table 1 shows the gains made by pupils based on the number of years they received service.

When the data were analyzed in terms of years of service received, pupils being served for the first time were found to have the greatest need. First and second year pupils made the greatest gains.

Objective 2: Pupils participating in this project three or more times a week during the school year will improve their decoding skills as indicated by a 20% gain in the mean score of the 64-item Botel Phonics Inventory administered in September and May.

This objective was considered attained.

A 64-item phonics inventory was administered to project pupils in September and May. Of the total group of pupils enrolled in the project, 1,354 had both pretest and posttest scores and had attended at least three times a week. The mean number of items correct on the September pretest was 41.67, and on the May posttest was 49.77. The gain of 8.10 items (19.43%) nearly achieved the 20% criterion. Pupils being served for the first time were found to have the greatest needs. Of the total group, 381 (27%) gained a 90% mastery or above in the items tested.

#### SUMMARY AND CONCLUSIONS

The Improvement of Reading Skills "A" project's intended mode of operation was fully implemented. An individualized, diagnostic-prescriptive reading program was provided to pupils with severe reading problems. Multimedia equipment and multilevel materials were used to accommodate the various assessed needs, interests, and skill levels of these pupils.

The vocabulary/comprehension skills objective was partially attained. For project pupils attending at least three times a week, 77% (more than the expected 75%) gained at least one book level. However, 46% of the pupils instead of the expected 55% gained at least two levels. The phonics achievement criterion was nearly attained. Pupils' decoding skills improved by a mean raw score gain of 19.43% instead of the expected twenty percent.

The project's instructional program continues to enhance the development of pupils with severe reading difficulties.

TABLE 1  
IMPROVEMENT OF READING SKILLS "A"  
SUMMARY OF PUPIL PROGRESS ON INFORMAL READING INVENTORY  
FROM PRETEST TO POSTTEST

| Change in IRI Score     | Percentage of Participating Pupils |                               |                               |                             |                             |
|-------------------------|------------------------------------|-------------------------------|-------------------------------|-----------------------------|-----------------------------|
|                         | 1 Year<br>of Service<br>(N=716)    | 2nd-Year<br>Pupils<br>(N=418) | 3rd-Year<br>Pupils<br>(N=173) | 4th-Year<br>Pupils<br>(N=8) | Four<br>Groups<br>(N=1,315) |
|                         | %                                  | %                             | %                             | %                           | %                           |
| Gain of 2 Books or More | 44.7                               | 49.0                          | 41.6                          | 37.5                        | 45.6                        |
| Gain of 1 Book          | 29.9                               | 29.7                          | 44.5                          | 25.0                        | 31.7                        |
| Loss or No Change       | 25.4                               | 21.3                          | 13.9                          | 37.5                        | 22.7                        |

IMPROVEMENT OF READING SKILLS "C"  
(A Component of the COMPREHENSIVE READING PROJECT)

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

Part "C" of the Improvement of Reading Skills project provides teachers of reading who give part-time remedial instruction to pupils with reading difficulties.

RATIONALE

The participating target-area pupils have failed to master the basic reading skills, and are reading below grade level. The project is based upon the assumption that supplementary services can ameliorate low achievement levels resulting from reading difficulties. Services are provided to improve the reading comprehension and word-attack skills of the participating pupils.

EXPECTED OUTCOMES

Through participation in the project, the pupils should improve their reading comprehension and their word-attack skills.

PREVIOUS FINDINGS

The project has been successful in helping many children who had reading difficulties to make gains in comprehension and word-attack skills.

In previous years, the differences between pretest and posttest scores on informal reading inventories indicated that 66% of the pupils participating in the project improved their instructional reading levels.

In the two years, 1974-1976, more than the expected 90% of the pupils gained at least one book level in reading achievement, and more than the expected 80% of the pupils gained at least two book levels during the school years.

In addition, there have been increases from fall to spring in the percentage of pupils attaining mastery on a phonics inventory. In 1975-1976, 79% of the pupils attained an 80% mastery of the phonics items tested.

EVALUATION OF THE CURRENT YEAR

This year's evaluation of Improvement of Reading Skills "C" focused on  
(a) the degree to which the participating pupils demonstrated increased reading-



achievement levels, as indicated by differences between pretest and posttest scores on a group informal reading inventory; and (b) the degree to which the pupils improved their decoding skills, as indicated by scores on a project-specific phonics inventory.

The evaluation team conducted the evaluation through observations, interviews, questionnaires, and analysis of test results.

## IMPLEMENTATION

In 1976-1977, the project's intended mode of operation was fully implemented.

A questionnaire for project teachers was used in the fall to determine average class size and grouping procedures, instructional schedules, maintenance of pupil records, and the degree of interaction with the regular classroom teachers. Using an observational checklist, the evaluation team conducted 22 classroom observations in 21 of the 43 reading centers. On-site teacher interviews were conducted with each of the 21 teachers visited.

In all centers supplemental reading instruction was provided to participating pupils. Teachers indicated that 99% of the children attended at least three times per week. Although the instructional periods ranged from 30 minutes to 60 minutes, the average period length was 45 minutes. The average size of the groups that received instruction was eight. Variations in schedules were made in an effort to accommodate the schools' schedules.

Teachers tended to group their classes by grade level. However, the reading level was used as the criterion for grouping, when there were two or more classes on one grade level. Project teachers maintained individual pupil records, and most of them communicated prescriptions and diagnoses to the regular classroom teachers several times a year. Much of this sharing of information was done on an informal basis with the classroom teachers.

During all of the 22 observations in 21 schools, the evaluators always found pupils involved in instructional tasks. Teachers used individual, small, and large group instructional methods. Teachers observed devoted 96% of their time to instructional tasks and 4% to clerical tasks. Individualized or small group instruction was observed during 17 of the 22 observations. Pupils were directed into several different activities during the course of a period and used varied materials for skill development. During 15 of the 22 observations, three to four or more kinds of materials were used.

A formal teacher-interview using an interview form was conducted with 20 of the 21 teachers observed; one teacher received an informal oral interview. Teachers interviewed indicated that 51% of the pupils served were new to the program. All 20 teachers formally interviewed stated that comprehension skills

was one of the two areas in which project pupils experienced the most reading difficulties; 17 of the 20 respondents felt word-attack skills was the other area. Most of the pupils' instructional time was devoted to these areas. The average number of years the 21 teachers had been in the project was six.

During the first half of the year, teachers were directed to conduct their classes for three hours each morning. In the second half, teachers were given the option of continuing with the five-day morning program or working three full days. Four teachers selected the latter option.

Besides supplying on-site help to teachers, the project's coordinator provided monthly staff development sessions for project teachers which focused on individualizing reading instruction. Additional help was provided to the new teachers, particularly in the area of administration of informal reading inventories and phonics inventories. In addition, efforts were made to familiarize teachers with new materials.

#### ATTAINMENT OF OBJECTIVES

Objective 1: Project pupils will increase their reading-achievement levels to the extent that 90% of the pupils gain at least one book level and 60% gain two or more book levels between September pretest and May posttest on a group Informal Reading Inventory.

The objective was partially attained.

Informal reading inventories (IRIs) were administered by the teachers in September and May. The number of pupils in each grade who made the specified gains between pretest and posttest are summarized in Table 1.

Eighty-five percent of the pupils gained at least one book level; 74% gained at least two levels.

Objective 2: Project pupils will improve their decoding skills to the extent that there is an increase of 20 points in the percentage of pupils attaining an 80% mastery score (68 or more correct out of 85 items) on a project-specific phonics inventory between September pretest and May posttest.

The objective was attained.

In September and May, an 85-item project-specific phonics inventory was administered to the pupils. Results for each grade are summarized in Table 2.

On the pretest, 33% of the pupils attained the specified 80% mastery score; on the posttest, 70% did so. The increase of 37 percentage points surpassed the 20-point expectation.

### SUMMARY AND CONCLUSIONS

The Improvement of Reading Skills "C" project's intended mode of operation was fully implemented. Supplemental reading instruction continued to be provided to pupils.

Project pupils exceeded the objective for phonics mastery (a 20-point gain in the percentage of pupils attaining mastery) by achieving 37 percentage points. However, in reading achievement, 85% of the pupils, instead of the expected 90%, gained at least one book level; 74% (more than the expected 60%) gained at least two book levels in a year's time.

The project continues to be successful in providing pupils with needed reading skills.

TABLE 1

IMPROVEMENT OF READING SKILLS "C": SUMMARY OF GAINS ON  
INFORMAL READING INVENTORY FROM PRETEST TO POSTTEST

| Grade | No. of Pupils | Pupils Making No Gains |      | Pupils Gaining One Level |      | Pupils Gaining Two or More Levels |      |
|-------|---------------|------------------------|------|--------------------------|------|-----------------------------------|------|
|       |               | N                      | %    | N                        | %    | N                                 | %    |
| 2     | 14            | 9                      | 64.3 | 2                        | 14.3 | 3                                 | 21.4 |
| 3     | 212           | 38                     | 18   | 29                       | 14   | 145                               | 68   |
| 4     | 288           | 24                     | 8    | 37                       | 13   | 227                               | 79   |
| 5     | 286           | 36                     | 13   | 37                       | 13   | 213                               | 74   |
| 6     | 241           | 27                     | 11   | 22                       | 9    | 192                               | 80   |
| 7     | 124           | 34                     | 27   | 7                        | 6    | 83                                | 67   |
| 8     | 40            | 10                     | 25   | 2                        | 5    | 28                                | 70   |
| TOTAL | 1,205         | 178                    | 15   | 136                      | 11   | 891                               | 74   |

TABLE 2

IMPROVEMENT OF READING SKILLS "C": PERCENTAGE OF PUPILS  
ATTAINING MASTERY ON PHONICS INVENTORY  
FROM PRETEST TO POSTTEST

| Grade | No. of Pupils | September Pretest | May Posttest | Increase in Percentage |
|-------|---------------|-------------------|--------------|------------------------|
| 2     | 14            | 0                 | 0            | 0                      |
| 3     | 214           | .91               | 7.75         | 6.84                   |
| 4     | 291           | 3                 | 14           | 11                     |
| 5     | 288           | 8                 | 20           | 12                     |
| 6     | 242           | 11                | 17           | 6                      |
| 7     | 124           | 8                 | 9            | 1                      |
| 8     | 40            | 2.23              | 2.80         | .57                    |
| TOTAL | 1,213         | 32.98             | 70.39        | 37.41                  |



## INDIVIDUALIZED EDUCATION CENTER (A Component of the COMPREHENSIVE READING PROJECT)

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

The Individualized Education Center (IEC) provides a compensatory program for pupils in St. Mary's Interparochial School, focusing on development of language arts and mathematics skills and using selected individualized instructional practices.

### RATIONALE

Pupils attending the IEC have varied ethnic and social-class backgrounds: there are affluent whites from the St. Mary's parish, poverty-stricken blacks from the Our Lady of the Blessed Sacrament parish, and pupils from Spanish-speaking families. The result is an experiment in voluntary integration of children bussed from different neighborhoods within the city.

The complex makeup of the pupil population requires the project's staff members to commit themselves to a philosophy and program of education which encourages the development of each pupil's self-esteem and appreciation of the worth of others. The staff attempts to develop each child's sense of social justice and responsibility by promoting self-directed learning experiences intended to correct the individual pupil's basic skill weaknesses.

### EXPECTED OUTCOMES

Through individualization of instructional practices, IEC aims for the improvement of pupil performance in basic skills, and the development of positive attitudes toward self and toward school.

### PREVIOUS FINDINGS

During its initial years (1968-1970) the project was evaluated by the coordinator of nonpublic school Title I projects. The evaluations were formative and revealed that the enabling objectives had been attained.

Beginning with the 1970-1971 school year, the evaluation focused on the degree of individualization of instructional practices. Attempts to individualize instruction through innovative class structure and teaching methods were observed. During subsequent years (1971-1972, 1972-1973), continued attempts to individualize instruction were hindered by a number of factors: (a) a high staff turnover

rate, (b) a change of principals, (c) fluctuation in pupil enrollment, (d) some scheduling difficulties, and (e) a limited budget for instructional materials. During these years, instructional differentiation was maintained through use of multiple-group settings.

From 1970 through June 1973, the average IEC pupil improved sufficiently within each year to maintain his/her standing in relation to national norms on the Iowa Tests of Basic Skills (ITBS). Between June 1973 and March 1974, average gains in grade-equivalent score ranged from one month to 15 months for the Arithmetic Skills, Reading Comprehension, and Vocabulary subtests. Excluding the three-month summer recess, this period included roughly six instructional months. However, the norms provided by the publisher of the test for these testing periods (and based on the questionable inference of cognitive growth during the summer recess) indicated that actual gains failed, in 14 of 20 instances, to maintain the pupils' relative standing with the norming population.

From 1973 through 1976, systematic observations of IEC classrooms revealed that in all observed classes the teachers attempted to provide individualized instruction through effective grouping procedures, teacher-directed and pupil-selected individual activities, and the judicious use of a wide variety of available multimedia equipment and instructional materials. IEC pupils generally reported positive attitudes toward their school experiences and a positive self-concept.

In Spring 1975 the California Achievement Tests (CAT) replaced the ITBS. Using the results of a comparability study conducted by the Office of Research and Evaluation, the evaluation team converted the 1974 ITBS mean scores to "predicted CAT scores" which were further converted to CAT national percentile ranks. A comparison of these 1974 results with the 1975 CAT results revealed that average gains in grade-equivalent score were sufficient to maintain or improve national percentile ranks in 7 of 10 instances. Moreover, between 1975 and 1976 average gains in reading and mathematics were sufficient to maintain or improve national percentile ranks in 18 of 28 comparisons.

#### EVALUATION OF THE CURRENT YEAR

The IEC evaluation during the current year focused upon the level of instructional differentiation and the development of the pupils' basic academic skills.

#### IMPLEMENTATION

In 1976-1977 the project's intended mode of operation was fully implemented. All eight teachers returned for the current school year. Consequently, the implementation of individualized instructional practices occurred early in the school year.

Grades 1-4 again functioned as self-contained classes and Grades 5-8 were departmentalized classes. Instructional materials and multimedia equipment were available in each classroom to provide appropriate learning experiences for all pupils according to their instructional levels. The Individualized Education Center (IEC) continued to receive the services of a full-time reading teacher and benefits from other Title I projects (Parent School Aides, Multimedia Center, Education in World Affairs, Counseling Services). All eight teachers received a minimum of two daily hours of aide assistance during reading, language-arts, and mathematics classes. Some teachers received as much as five hours of aide assistance a day.

The project again implemented an extensive tutoring program involving students from a local college and pupils from the upper grades within the school. Moreover, some IEC pupils were eligible for special reading services provided by a special state funded agency.

Finally, IEC teachers were observed using the Fountain Valley Teacher Support System and the Continuous Progress Program of the Archdiocese of Philadelphia. Both systems appeared to aid the staff in individualizing instruction.

#### ATTAINMENT OF OBJECTIVES

Objective 1: Project pupils will develop basic skills in reading during the 1976-1977 school year to the extent evidenced by at least maintaining their national percentile ranks from the previous school year on the Reading Vocabulary and Reading Comprehension sections of the California Achievement Tests.

This objective was partially attained.

The Comprehension and Vocabulary sections of the California Achievement Tests (CAT-70) were administered to project pupils in Grades 1-8 in May 1977. Each grade's mean score was converted to the corresponding individual-pupil national percentile rank in the publisher's norm tables. Percentile ranks for 1976 and 1977 are shown in Table 1.

Between May 1976 and May 1977, current Grades 4, 5, 6, and 8 exhibited gains in mean scores on the Reading Vocabulary section of CAT-70, which were sufficient to maintain or improve their national percentile ranks. Current Grades 3, 4, 5, 6, and 8 maintained or improved their national percentile ranks in Reading Comprehension. Only Grades 2, 3, and 7 in Reading Vocabulary and Grade 2 and 7 in Reading Comprehension failed to maintain their percentile ranks of the previous year.

Objective 2: Project pupils will develop basic skills in mathematics during the 1976-1977 school year to the extent evidenced by at least maintaining their

national percentile ranks from the previous school year on the Mathematics Computation and Mathematics Concepts and Problems section of the California Achievement Tests.

This objective was partially attained.

The Computation and Concepts/Problems sections of CAT-70 were administered to all project pupils in May 1977. By means of the score-conversion procedures used in treating Objective 1, the current year's CAT-70 results were compared with the previous year's scores. National percentile ranks for each grade are shown in Table 2.

Between May 1976 and May 1977, current Grades 3, 5, 7, and 8 exhibited gains in mean score on the Mathematics Computation section of the CAT, which were sufficient to maintain or improve their national percentile ranks. Current Grades 4, 5, 6, and 8 maintained or improved their national percentile ranks on the Mathematics Concepts/Problems section. Only Grades 2, 4 and 5 in computation and Grades 2, 3, and 7 in Concepts/Problems failed to maintain their percentile ranks of the previous year.

Objective 3: With the assistance of paraprofessionals and a reading specialist teacher, project teachers will implement a system of individualized instruction in basic academic skill areas (reading, language arts, and mathematics) as determined by systematic observations of IEC classrooms with the Learning Environment Checklist. The following criteria will be applied: (a) with respect to classroom grouping arrangements, pupils will be working in small groups (2 to 10 pupils) and/or as individuals during at least 85% of observed time; (b) with respect to the level of instructional differentiation, in less than 5% of observed time will all pupils be working on the same assignment; (c) with respect to the role of the teacher, in at least 50% of observed time the teachers will be actively guiding and/or assisting groups or individuals; (d) with respect to the activities of the paraprofessionals, at least 25% of observed time will be devoted to working with individual children; and (e) with respect to the pupils' activities, at least 25% of observed time will be devoted to individual activities (self-selected or teacher-directed).

This objective was partially attained. Parts b, d and e were attained; parts a and c were not.

Observations were conducted three times during the school year (October, January/February, May) using the Learning Environment Checklist to describe the instructional system in project classrooms. Major characteristics included in the checklist were (a) classroom organization (including the number of pupils in each group), (b) instructional differentiation level, (c) teacher role, (d) paraprofessional activities, (e) pupil activities, and (f) pupil attitudes. Thirty-minute observation periods were divided into 51



consecutive five-minute intervals observation periods were divided into six consecutive five-minute intervals during which judgements for each of the six characteristics were recorded.

Findings from the 38 thirty-minute observations are shown in Tables 3 to 7. Generally, teachers of observed IEC classes attempted to provide individualized instruction by using effective grouping procedures, teacher-directed and pupil-selected individual activities, multimedia equipment, and instructional materials.

The following summarizes the observation data: (a) pupils were working in small groups and/or as individuals during 80% of observed time; (b) all pupils were working on the same assignment during 4% of observed time; (c) teachers were actively guiding and/or assisting groups or individuals during 32% of observed time; (d) paraprofessionals were performing clerical tasks during only 5% of observed time; and (e) pupils were working on individual activities (self-selected or teacher directed) during 42% of observed time.

#### SUMMARY AND CONCLUSIONS

The Individualized Education Center continues to serve as a model of successful integration by bussing children from various parts of the city and by providing them with a compensatory program that remediates their academic weaknesses through an extensive system of individualized instruction.

The project was fully implemented according to its intended mode of operation.

The current year's evaluation employed extensive classroom observations and the administration of a standardized achievement test series.

The project's objectives were partially attained. Results of administering the CAT-70 showed that average gains in reading and mathematics between May 1976 and May 1977 were sufficient to maintain or improve national percentile ranks in 17 of 28 instances. Moreover, formal observations revealed the successful attainment of 3 of 5 conditions which contribute to a system of individualized instruction.

TABLE 1

1976 AND 1977 PERCENTILE RANKS AND GE GAINS  
 BASED ON MEAN SCORES OF SAME IEC PUPILS  
 ON READING SECTIONS OF CAT-70

| 1977<br>Grade<br>Level | Vocabulary      |      |            | Comprehension   |      |            |
|------------------------|-----------------|------|------------|-----------------|------|------------|
|                        | Percentile Rank |      | GE<br>Gain | Percentile Rank |      | GE<br>Gain |
|                        | 1976            | 1977 |            | 1976            | 1977 |            |
| 1                      | --              | 92   | --         | --              | 89   | --         |
| 2                      | 87              | 81   | 1.4        | 91              | 70   | 0.6        |
| 3                      | 76              | 56   | 0.4        | 70              | 72   | 1.5        |
| 4                      | 56              | 65   | 1.3        | 55              | 68   | 1.6        |
| 5                      | 38              | 49   | 1.7        | 41              | 50   | 1.5        |
| 6                      | 36              | 46   | 1.4        | 46              | 47   | 1.0        |
| 7                      | 53              | 34   | 0.0        | 59              | 49   | 0.3        |
| 8                      | 31              | 33   | 1.0        | 44              | 44   | 0.9        |

TABLE 2

1976 AND 1977 PERCENTILE RANKS AND GE GAINS  
 BASED ON MEAN SCORES OF SAME IEC PUPILS  
 ON MATHEMATICS SECTIONS OF CAT-70

| 1977<br>Grade<br>Level | Computation     |      |            | Concepts/Problems |      |            |
|------------------------|-----------------|------|------------|-------------------|------|------------|
|                        | Percentile Rank |      | GE<br>Gain | Percentile Rank   |      | GE<br>Gain |
|                        | 1976            | 1977 |            | 1976              | 1977 |            |
| 1                      | --              | 71   | --         | --                | 80   | --         |
| 2                      | 68              | 61   | 0.7        | 70                | 66   | 1.0        |
| 3                      | 73              | 73   | 1.2        | 80                | 63   | 0.7        |
| 4                      | 44              | 36   | 0.4        | 48                | 63   | 1.6        |
| 5                      | 36              | 50   | 2.3        | 48                | 49   | 1.0        |
| 6                      | 47              | 40   | 0.6        | 43                | 55   | 1.5        |
| 7                      | 47              | 51   | 1.2        | 55                | 47   | 0.3        |
| 8                      | 27              | 33   | 1.3        | 33                | 33   | 1.2        |

TABLE 3  
CLASSROOM ORGANIZATION OBSERVED IN  
INDIVIDUALIZED EDUCATION CENTER

| Organization             | Five Minute Observation Periods |            |
|--------------------------|---------------------------------|------------|
|                          | Number                          | Percentage |
| Whole Class              | 14                              | 6%         |
| Two Groups               | 26                              | 11         |
| More than Two Groups     | 13                              | 6          |
| Group(s) and individuals | 151                             | 66         |
| Individuals              | 24                              | 11         |
| Undetermined             | 0                               | 0          |

TABLE 4  
DIFFERENTIATION OF INSTRUCTION OBSERVED IN  
INDIVIDUALIZED EDUCATION CENTER

| Level of Differentiation                                      | Five-Minute Observation Periods |            |
|---------------------------------------------------------------|---------------------------------|------------|
|                                                               | Number                          | Percentage |
| Whole Class with Same Task                                    | 10                              | 4%         |
| Two or More Groups with Different Tasks                       | 41                              | 18         |
| One or More Groups plus Individuals, All with Different Tasks | 148                             | 65         |
| Individuals: All Pupils in the Class with Different Tasks     | 29                              | 13         |
| Undetermined                                                  | 0                               | 0          |

TABLE 5  
TEACHER ROLES OBSERVED IN IEC CLASSES

| Role                                             | Five-Minute Observation Periods |            |
|--------------------------------------------------|---------------------------------|------------|
|                                                  | Number                          | Percentage |
| Passive: Available for Guidance                  | 13                              | 6%         |
| Actively Guiding/Assisting Groups or Individuals | 74                              | 32         |
| Presenting Information to Groups or Individuals  | 113                             | 50         |
| Directing/Lecturing Whole Class                  | 12                              | 5          |
| Performing Administrative Tasks                  | 16                              | 7          |
| Teacher Not Available                            | 0                               | 0          |

TABLE 6  
ACTIVITIES OF PARAPROFESSIONALS OBSERVED IN IEC CLASSES

| Activity                                            | Five-Minute Observation Periods |            |
|-----------------------------------------------------|---------------------------------|------------|
|                                                     | Number                          | Percentage |
| Supervising/Assisting Groups of More than 10 pupils | 3                               | 1%         |
| Supervising/Assisting Groups of 2-10 Pupils         | 114                             | 50         |
| Supervising/Assisting Individuals                   | 64                              | 28         |
| Performing Clerical/Administrative Tasks            | 11                              | 5          |
| Unstructured Time                                   | 8                               | 4          |
| Absent or Not Available                             | 28                              | 12         |



TABLE 7

## ACTIVITIES OF PUPILS OBSERVED IN IEC CLASSES

| Activity                    | Five-Minute Observation Periods |            |
|-----------------------------|---------------------------------|------------|
|                             | Number                          | Percentage |
| Inappropriate Activity      | 0                               | 0%         |
| Waiting or Moving           | 8                               | 3          |
| Getting/Returning Materials | 4                               | 2          |
| Group Activity              | 121                             | 53         |
| Individual Activity         | 95                              | 41         |

INTENSIVE READING FOR SECONDARY STUDENTS  
(A Component of the COMPREHENSIVE READING PROJECT)

In accordance with the court order of August 4, 1975, Intensive Reading for Secondary Students provides supplemental small-group instruction in reading for Title I secondary students having reading-skill deficits.

RATIONALE

On standardized tests of basic skills, Title I students tend to score below national norms for their grade level, particularly in reading. The project is based upon the assumption that supplementary reading services and additional instructional periods in reading can ameliorate secondary students' general achievement levels which are low because of their reading difficulties. Additional reading personnel and small-group reading-instruction periods are provided as mandated by the court order of August 4, 1975.

EXPECTED OUTCOMES

Pupils who attend the reading classes in grades 7-12 during 1976-1977 will show measurable improvement by grade in reading comprehension and vocabulary skills from the 1975-1976 school year.

PREVIOUS FINDINGS

During 1975-1976, 35,000 eligible pupils were served in grades 7-12 by 234 Title I reading teachers who taught at least five periods of remedial reading per day as well as 244 regular teachers who taught at least one Title I class per week. Class sizes averaged 13.7 students in junior/middle schools; 12.8 in senior high schools.

Of students in grades 7-9 who scored below the 16th %ile in 1975-1976, almost half of those attending classes 85% of the time increased percentile rank; 40% of those who attended less than 85% gained in reading.

Results were less positive for students who scored from the 16th-32nd %ile in 1975-1976. Grade 12 showed a similar pattern. Grades 10 and 11 showed more loss than gain.

EVALUATION OF THE CURRENT YEAR

The 1976-1977 evaluation of Intensive Reading for Secondary Students focused upon project implementation and on academic gain. Students who participated in the program during the 1975-1976 school year should increase their average percentile rank by three points.

## IMPLEMENTATION

Intensive Reading for Secondary Students was fully operational during the 1976-1977 school year. Eleven senior high schools and 22 junior high/middle schools were included in the project. Each school was visited by state monitors, the project administrator, district and central office reading personnel, and the evaluator.

Schools were able to document participation in this project by careful record keeping as described in the Title I application. Records on file in each school included: (1) a list of reading teachers and their funding; (2) a list of all teachers and staff; (3) individual Title I Reading class lists with teachers' names; (4) English class lists with teachers' names; (5) the number of Reading and English periods per Title I student; (6) the number of Title I eligible students and their test scores; (7) Title I eligible students waiting to be served; and (8) the total school enrollment.

Thirty-three Title I eligible secondary schools enrolled a total of 49,320 students in grades 7-12; 43,959 of whom were tested in February 1977. While only students in Title I schools may receive Title I service, not all students in Title I schools are Title I served. A series of computer assisted matches, merges, sorts and deletions resulted in the identification of 19,918 students scoring below the 26th percentile in 1976 who were tested and served in 1977. Table 1 details the steps involved in identifying these students.

School visits, interviews with Reading leaders, and examinations of program documentation found all eligible students being served.

In junior high/middle schools, classes averaging 22 students received five additional reading periods per week. In senior high schools, classes averaging 20 students received five additional reading periods. Schools administered a group IRI to place students who lacked CAT scores.

Problems resulting from the original 1975-1976 implementation have, for the most part, been resolved. Rather than rostering high school students to remedial classes during periods when regular subjects were previously scheduled, all reading classes for 1976-1977 were part of the students' regular rosters. Teachers in the other curricular areas no longer complained that reading classes were detrimental to students who wished to carry a normal complement of courses. Reading teachers reported that cuts, a major problem during 1975-1976, have been greatly reduced as a result of the regular rostering.

A total of 411 teachers taught from five to 25 periods of Title I Reading per week. Of 266 full time (25 periods) teachers of Title I Reading, 192 (72%) were paid from Title I funds; 188 of these 192 (98%) possessed elementary certification. This data is presented in Table 2. Reading leaders in each school were generally positive toward elementary trained teachers working in the secondary schools. Being in a new (secondary) situation, these teachers were anxious for help, and

open to suggestions on working with the older students. The elementary trained teachers' adjustment to teaching on the emotional as well as the educational level of secondary students was cited by the Reading chairmen as the greatest improvement over last year's program. Many of these teachers have enrolled in reading certification courses offered by local universities.

Classroom visits on all grade levels revealed students using specific skills materials. In typical classes, students kept their work in folders which were collected daily. Depending on the school organization, classes consisted of one grade, or a combination of two or three grades. Regardless of grade, however, classes were individualized. Students were observed using a variety of books, worksheets, and kits. Listening centers were also employed. Literature, poetry, study skills and test taking techniques were all observed in the Reading classes.

Reading in secondary schools is considered a part of the English curriculum. As a result, there is no official Reading department (and in high schools no Reading department chairmen). Teachers acting in the role of Reading leaders received roster compensation only (usually 10 periods per week). In several schools, Reading program-English coordination was dependent upon the relationship between the English department chairman (or leader in junior/middle schools) and the Reading leader. In schools where there was a close working relationship, materials were ordered together to avoid duplication, and work in the Reading classes was supportive of work in the regular English classes. Reading leaders in high schools have organized in an attempt to create a separate Reading department.

In schools where space permitted, each teacher was assigned to a classroom. Where space was at a premium, teachers were forced to travel from room to room carrying their folders, books, and materials on carts. This often caused a delay in the start of classes, especially when carts had to be carried up or down stairs. Classes were observed in lunchrooms, corridors, and activity rooms as well as regular classrooms. In several high schools, as many as eight classes were observed meeting in one open area. While each group appeared to be working, the obvious distractions could not go unnoticed.

#### ATTAINMENT OF OBJECTIVES

Objective 1: Selected Title I students in Grades 7-12 participating in the Intensive Reading for Secondary Schools project will improve their reading skills as measured by the Total Reading score of the California Achievement Test (CAT) so that from 1976 to 1977, there will be an increase of three percentile points in the average percentile rank for each grade.

This objective was not attained.

As shown in Table 1, a total of 19,918 students in grades 7-12 who were eligible for the project on the basis of their 1976 CAT Total Reading scores were tested in 1977. In comparison to 1976 scores, grade 7 students increased two



percentile points from grade 6. Grade 8 students increased two percentile points from grade 7. Grade 9 students increased one percentile point from grade 8. Grade 10 students decreased one percentile point from grade 9. Grade 11 students decreased two percentile points from grade 10. Grade 12 students increased two percentile points from grade 11.

Table 3 shows, by grade, the number of students tested, average percentile rank, and differences between 1976 and 1977 Total Reading scores. (NOTE: Percentile ranks cannot be averaged. Achievement Development Scale Scores (ADSS) were averaged by grade for 1976 and 1977. The average ADSS per grade was then converted to the closest corresponding percentile rank.) Table 4 compares Total Reading scores by grade, in terms of number and percent of pupils whose 1977 scores decreased, remained the same, increased or increased by more than three percentile points from 1976. In terms of the actual percent of students who attained Objective 1, results ranged from 22.0% (grade 11) to 48.9% (grade 8). For all grades, 37.9% of students served by Intensive Reading for Secondary Students increased their 1976 Total Reading scores by at least three percentile points.

While Objective 1 was not attained, the project need not be considered unsuccessful. Traditionally, the percentile rank of the mean lowers as time in school (grade) increases. Maintaining the percentile rank from one year to the next may be considered a positive finding. Figure 1 compares changes in percentile rank for grades 7-12 in 1977 and grades 6-11 in 1976. Results are presented for three groups: all secondary schools, Title I secondary schools, and students in Title I schools served by Intensive Reading for Secondary Students.

In terms of maintaining percentile rank from 1976 to 1977, students served by the project performed better than the other two groups in five of six grades. Grade 12 was the one exception. Senior students in Title I schools and all grade 12 students citywide each increased an average of four percentile points from 1976. Grade 12 students served by Intensive Reading for Secondary Students increased an average of two percentile points.

While the objective was not attained, the results do represent a reversal in the established trend of the percentile rank of the mean decreasing from grade to grade. Citywide scores decreased in grades 10 and 11; Title I school scores decreased in grades 9, 10, and 11. Students in the project did not decrease as dramatically in any grade. Thus, this pattern of no change may realistically be considered an improvement.

Objective 2: Selected Title I eligible A.V.T. students in Grades 10-11 and comprehensive high school students in Grades 10-12 whose 1976 CAT Total Reading Scores were below the 26th percentile will receive five additional periods of reading instruction per week in classes having a schoolwide average enrollment not exceeding 20 students.

Total Reading section of the CAT in 1976. Of those eligible for service on the basis of their 1976 scores, 19,918 were tested in 1977.

There were four project objectives; three involved project implementation and one involved performance. The three implementation objectives were attained. Careful record keeping showed students selected for service on the basis of their 1976 scores received five additional periods of reading instruction per week in all junior/middle, senior, and area vocational technical schools (with the exception of grade 12 AVT students who received two periods per week). In high schools, the schoolwide average enrollment per class did not exceed 20 students; in junior/middle schools it did not exceed 22 students.

The performance objective was not attained. No grade was able to increase three percentile points from 1976 to 1977. A total of 19,918 students in grades 7-12 who were eligible for the project on the basis of their 1976 scores were tested in 1977. In comparison to 1976 scores, grade 7 students increased two percentile points from grade 6. Grade 8 students increased two percentile points from grade 7. Grade 9 students increased one percentile point from grade 8. Grade 10 students decreased one percentile point from grade 9. Grade 11 students decreased two percentile points from grade 10. Grade 12 students increased two percentile points from grade 11.

For all grades, 7,558 students (38%) gained the three or more percentile points necessary to attain the objective. The greatest success was noted in grades seven (46%), eight (49%), nine (41%) and twelve (43%). Grades ten (25%) and eleven (22%) showed the least success.

Problems encountered during the original 1975-1976 implementation were resolved. All reading classes were part of the students' regular rosters.

Classroom visits revealed students using specific skills materials. In typical classes, students kept their work in folders. Classes were individualized, and used a variety of books, worksheets and kits.

Where space permitted, each teacher was assigned a classroom. Otherwise, teachers traveled from room to room carrying their folders, books and materials on carts. In several schools, as many as eight classes were observed meeting in one open area.

Intensive Reading for Secondary Students was fully implemented, and served that population for which it was intended. Although the performance objective was not attained, it need not be interpreted negatively. Students served by the project did manage to maintain their percentile rank from one year to the next. Considering the fact that citywide, the percentile rank of the mean decreases from grade to grade, the results of this project represent a reversal of this established trend. Thus, a pattern of no change can realistically be considered an improvement.

This objective was attained.

Schools documented participation in the project by careful record keeping. Project personnel reviewed these records, especially individual Title I Reading class lists with teachers' names and students' 1976 scores. Selected Title I eligible A.V.T. students in grades 10-11 and comprehensive high school students in grades 10-12 whose 1976 CAT Total Reading scores were below the 26th percentile did receive five additional periods of reading instruction per week in classes having a schoolwide average enrollment not exceeding 20 students.

Objective 3: Selected Title I eligible A.V.T. students in Grade 12 whose 1976 CAT Total Reading Scores were below the 26th percentile will receive two additional periods of reading instruction per week in classes having a schoolwide average enrollment not exceeding 20 students.

This objective was attained.

Schools documented participation in the project by careful record keeping. Project personnel reviewed these records and were able to determine that selected Title I eligible A.V.T. students in grade 12 whose 1976 CAT Total Reading scores were below the 26th percentile did receive two additional periods of reading instruction per week in classes having a schoolwide average enrollment not exceeding 20 students.

Objective 4: Selected Title I eligible junior/middle school students in Grades 7-9 whose 1976 Total Reading scores were below the 26th percentile will receive five additional periods of reading instruction per week in classes having a schoolwide average enrollment not exceeding 22 students.

This objective was attained.

Schools documented participation in the project by careful record keeping. Project personnel reviewed these records and were able to determine that selected Title I eligible junior/middle school students in grades 7-9 whose 1976 CAT Total Reading scores were below the 26th percentile did receive five additional periods of reading instruction per week in classes having a schoolwide average enrollment not exceeding 22 students.

#### SUMMARY AND CONCLUSIONS

The project was fully operational for the entire 1976-1977 school year in eleven senior high schools and 22 junior/middle schools. In addition to 192 Title I funded teachers of reading who taught 25 periods per week (full time) and 6 who taught part-time, 213 operating budget teachers taught at least five periods per week of Intensive Reading.

Of 49,320 students enrolled in Title I secondary schools in February, 1977, 21,057 qualified for the project by scoring at or below the 25th percentile on the

TABLE 1

Steps Involved in Identifying Students Served by  
Intensive Reading for Secondary Students

| Step                                                                                  | How determined                 | # of Students |
|---------------------------------------------------------------------------------------|--------------------------------|---------------|
| 1. Determine students on Roll in 33 Title I eligible secondary schools, February 1977 | Monthly reports                | 49,320        |
| 2. Determine number of students tested on CAT, February 1977                          | Division of Testing            | 43,959        |
| 3. Match February 1977 and February 1976 CAT scores                                   | Computer Match of I.D. numbers | 35,203        |
| 4. Delete any student with 1976 score of >25 percentile (cut off for Title I service) | Computer sort                  | 21,057        |
| 5. Delete any student who did not have Total Reading scores for 1976 and 1977         | Computer "EXTRACTO" program    | 19,918        |

STUDENTS TESTED RECEIVING TITLE I SERVICE = 19,918



TABLE 2

Periods per Week, Funding Source and Certification of  
Teachers in the Intensive Reading for Secondary Students Program

| Periods of<br>Reading Taught<br>per Week | Number<br>of<br>Teachers | Teacher Funding       |           | Title I Funded Teachers<br>With Elementary Certification |      |
|------------------------------------------|--------------------------|-----------------------|-----------|----------------------------------------------------------|------|
|                                          |                          | # Operating<br>Budget | # Title I | N                                                        | %    |
| 5                                        | 72                       | 71                    | 1         | 1                                                        | 100% |
| 10                                       | 48                       | 48                    | 0         | 0                                                        | 0%   |
| 15                                       | 9                        | 8                     | 1         | 0                                                        | 0%   |
| 20                                       | 16                       | 12                    | 4         | 2                                                        | 50%  |
| 25 (full<br>time)                        | 266                      | 74                    | 192       | 188                                                      | 98%  |
| Total                                    | 411                      | 213                   | 198       | 191                                                      | 96%  |

TABLE 3

Average\* Percentile Rank Differences by Grade from  
1976 to 1977 in Terms of CAT Total Reading for Students  
Served by Intensive Reading for Secondary Students

| Grade | 1976<br>N | %ile | Grade | 1977<br>N | %ile | 1976-1977 %ile<br>difference |
|-------|-----------|------|-------|-----------|------|------------------------------|
| 6     | 3,277     | 10   | 7     | 3,277     | 10   | +2                           |
| 7     | 3,808     | 9    | 8     | 3,808     | 11   | +2                           |
| 8     | 3,659     | 9    | 9     | 3,659     | 10   | +1                           |
| 9     | 3,624     | 9    | 10    | 3,624     | 8    | -1                           |
| 10    | 2,910     | 8    | 11    | 2,910     | 6    | -2                           |
| 11    | 2,640     | 6    | 12    | 2,640     | 8    | +2                           |

\*Percentile ranks can not be averaged. Achievement Development Scale Scores (ADSS) were averaged by grade for 1976 and 1977. The average ADSS per grade was then converted to the closest corresponding percentile rank.

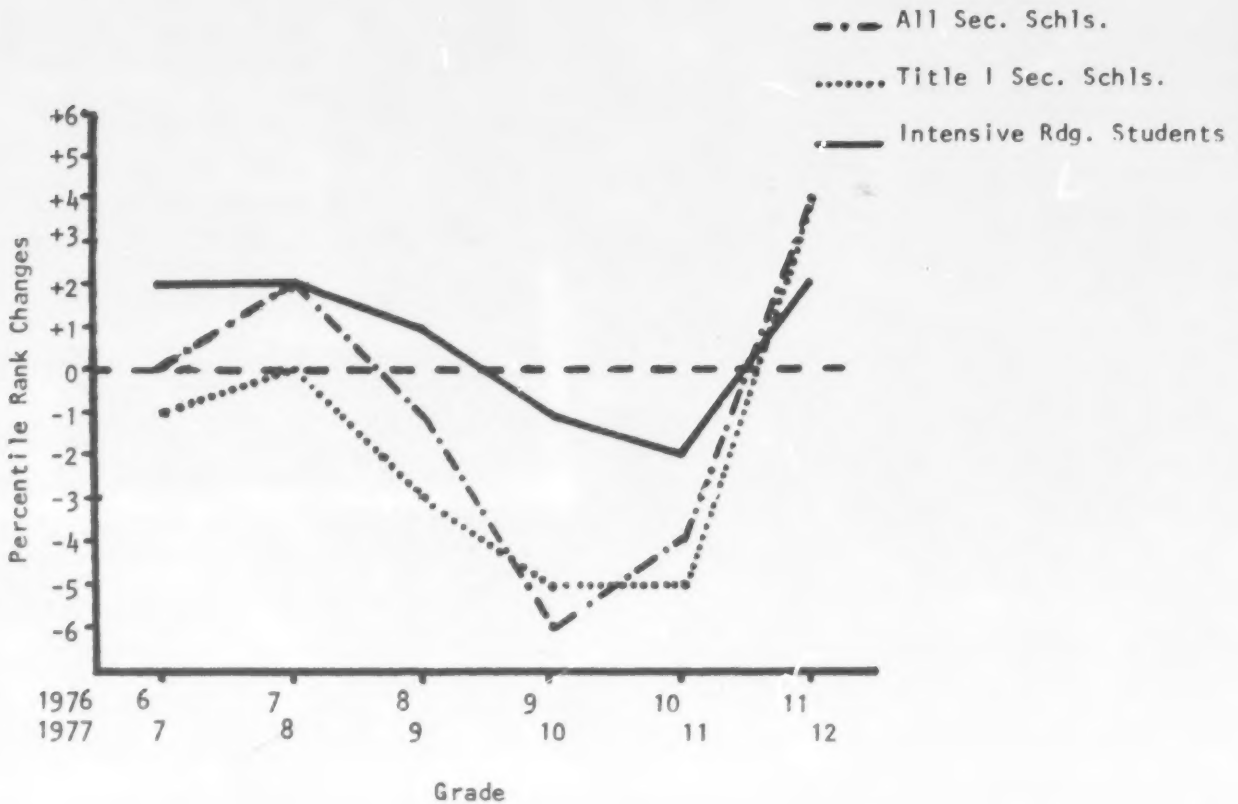
TABLE 4

Number and Percent of Students Served by Intensive Reading for  
Secondary Students Whose 1977 CAT Total Reading Scores Decreased,  
Remained the Same, Increased or Increased by Three or More  
Percentile Points from 1976

| 1977<br>Grade | Number<br>Tested | 1976-1977 Comparison |       |             |       |                  |       |                    |       |
|---------------|------------------|----------------------|-------|-------------|-------|------------------|-------|--------------------|-------|
|               |                  | Decreased in '77     |       | Same in '77 |       | Increased in '77 |       | Increased $\geq 3$ |       |
|               |                  | N                    | %     | N           | %     | N                | %     | N                  | %     |
| 7             | 3,277            | 1,340                | 40.9% | 164         | 5.0%  | 1,773            | 54.1% | 1,514              | 46.2% |
| 8             | 3,808            | 1,337                | 35.1% | 241         | 6.3%  | 2,230            | 58.6% | 1,864              | 48.9% |
| 9             | 3,659            | 1,458                | 39.8% | 238         | 6.5%  | 1,963            | 53.7% | 1,515              | 41.4% |
| 10            | 3,624            | 1,927                | 53.2% | 349         | 9.6%  | 1,348            | 37.2% | 892                | 24.6% |
| 11            | 2,910            | 1,700                | 58.4% | 291         | 10.0% | 919              | 31.6% | 641                | 22.0% |
| 12            | 2,640            | 879                  | 33.3% | 283         | 10.7% | 1,478            | 56.0% | 1,132              | 42.9% |
| Total         | 19,918           | 8,641                | 43.4% | 1,566       | 7.8%  | 9,711            | 48.8% | 7,558              | 37.9% |

FIGURE 1

Changes in Percentile Rank for Grades 7-12, 1977 and 6-11, 1976 in Terms of Total Reading for All Secondary Schools, Title I Secondary Schools, and Students in Title I Schools Served by Intensive Reading For Secondary Students





OPERATION INDIVIDUAL  
(A Component of the COMPREHENSIVE READING PROJECT)

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

Operation Individual is designed to help underachieving 9th and 10th graders develop competence in basic academic skills.

RATIONALE

The project operates on the assumption that the underachievement of Title-I-eligible students is attributable to their deficiency in basic skills, and inadequate study skills. On standardized tests of basic skills, they tend to score below national norms, particularly in reading. They also have difficulty in coping with the demands of high school curricula and tend to develop patterns of chronic underachievement. The project is designed to provide these students with increased supervision and individualization of instruction to improve their chances of academic success.

EXPECTED OUTCOMES

By participating in the project, students should develop competence in reading and study skills.

PREVIOUS FINDINGS

Objectives for student progress on tests of reading and reference skills, and on teachers' ratings of academic skills and responsibilities, have been attained where students have received the project's supportive service in reading classes only. Where the project has provided intensive service with additional aides in mathematics, English, and social studies classrooms, academic skill ratings in the subjects exceeded expectations, but test results and responsibility ratings fell short of the project's objectives.

EVALUATION OF THE CURRENT YEAR

The current year's evaluation of Operation Individual focused on (a) participants' gains in reading and reference skills measured by standardized tests, and (b) in the case of students receiving intensive service, their improvement in the specified skills in each of the subject areas.

## IMPLEMENTATION

During 1976-1977, Operation Individual provided services to Title-I-eligible students in four nonpublic high schools, in a manner generally consistent with the Title I Application.

The project operated at different levels of intensity for two groups of students. Those receiving only supportive reading service had daily reading instruction either directly from a reading teacher or from an aide who was supervised by a reading teacher. Students receiving intensive reading service had similar daily instruction in reading plus classes in mathematics, English, and social studies where each regular teacher had an aide available to assist individual students as the need arose. The main features of the project's implementation in each participating school are summarized in Table 1.

In each school, the participating students were selected because of their low reading scores on a Scholastic Testing Service achievement test, inadequate study skills, and/or low academic achievement indicated by school records. Also in each school, the project's instruction in reading included the development of more general study skills.

The evaluation team visited each participating school at least six times during the school year, conferring with teachers and aides, observing the project's classes, reviewing students' quarterly skill records, and interpreting pretest and posttest results. The posttesting schedule was complicated by a citywide transit strike, which caused many participating students to be absent for an extended period.

## ATTAINMENT OF OBJECTIVES

Objective 1: Project students will increase their achievement levels to the extent that two thirds of them will demonstrate a month-for-month gain in GE score on the Total Reading and Reference Skills sections of the Comprehensive Tests of Basic Skills.

This objective was not attained.

Students in their first year of participation in the project were tested with Form S of the CTBS in October 1976 and with Form T in April 1977. Their gains during the 6 months between tests are summarized in Table 2. In reading, 51.5% made the expected 6-month GE gain; in reference skills, 47.6% did so. Fifty-six cases were omitted from the analysis because it was believed that variations in procedures before the posttest had invalidated those scores.

Second-year participants, who had taken Form S in April 1976, were not retested in October but took Form T in April 1977. Their gains during the 10-month year between tests are summarized in Table 3. In reading, 82.8% made the expected 10-month GE gain; in reference skills, 40.2% did so.

Results for all project participants, classified by grade, by year of participation, and by type of service received, are summarized in Table 4. The overall percentages of students who demonstrated a month-for-month gain--53.6% in reading and 46.2% in reference skills--both fell short of the expected 66.7% success rate.

Objective 2: During the school year, students will improve their performance in reading to the extent that 86% of those who receive supportive reading service will obtain (a) a minimum of one quarterly rating of at least "some additional knowledge gained" on the Student Skill Record for Reading and (b) a minimum of one quarterly rating of at least "good responsibility for own learning" on the same Student Skill Record.

This objective was fully attained.

The Student Skill Record for Reading listed five specific content skills and four specific responsibility skills. For each applicable content skill the teacher recorded a rating, "Gained significant additional knowledge," "Gained some additional knowledge," or "No progress." For each applicable responsibility skill the teacher indicated either "Excellent," "Good," "Adequate," "Unsatisfactory," or "No effort." In each skill the student was expected to earn one of the two highest ratings during some quarter of the school year. The performance of each participating student was rated in November, January, March, and May by the student's respective reading teacher.

Results for students receiving supportive service are summarized in the lower portion of Table 5. Of 346 students who received such service, the criterion rating of at least "some additional knowledge gained" was obtained by 88% and the criterion rating of at least "good responsibility for own learning" was obtained by 80%. Both percentages surpassed the expected 66% success rate. In fact, 73% of the students met both criteria, for progress in gaining knowledge and for responsibility for their own learning.

Objective 3: Project students will increase their achievement levels to the extent that 66% of those who receive intensive service will obtain (a) a minimum of one quarterly rating of at least "some additional knowledge gained" on the Student Skill Records for three of four subject areas (Reading, Mathematics, English, and Social Studies) and (b) a minimum of one quarterly rating of at least "good responsibility for own learning" on the Student Skill Records for three of the same four subject areas.

This objective was fully attained.

The Student Skill Record for each subject listed 5 or 7 specific content skills and 4 or 5 specific responsibility skills. The performance of each student who

received the project's intensive service was rated by the respective subject teachers in the same manner, at the same times, and with the same expectations per subject as was done by the reading teachers for Objective 2. The "intensive service" students were expected to qualify in at least 3 of the 4 subjects.

Results for students receiving intensive service are summarized in the upper portion of Table 5. Of 207 students who received such service, the criterion ratings of at least "some additional knowledge gained" in at least three subject areas were obtained by 100%, and the criterion ratings of at least "good responsibility for own learning" in at least three subject areas were obtained by 73%, who, of course, met both criteria. Both percentages surpassed the expected 66% success rate.

#### SUMMARY AND CONCLUSIONS

Although specific applications differed among the four participating schools, the project's implementation was generally consistent with the Title I Application. Services focused primarily on the needs of eligible ninth-grade students, and secondarily on those of eligible tenth graders.

A student's eligibility to participate in this project was indicative of a history of far less than the "normal" month-for-month growth in reading and study skills. Although both proportions fell short of the stated objective (two thirds), between pretest and posttest more than half (54%) of the project's participants achieved at least month-for-month gains in reading, and almost half (46%) did so in study skills. Among first-year participants, in the six months (0.6 year) between tests, 20% gained more than 2.0 GE in reading and 29% did so in study skills. Among second-year participants, in the 1.0 year between tests, 21% gained at least 2.5 GE in reading and 18% did so in study skills.

Quarterly ratings by teachers indicated that students receiving supportive service (in reading only) were making the desired progress in developing their reading skills and that recipients of intensive service (in four subjects) were acquiring the skills necessary for success in reading, mathematics, English, and social studies classes. Both groups of students were rated as showing the expected degree of responsibility for their own academic success. Thus both objectives involving teachers' ratings of student progress were fully attained,



TABLE 1

## SERVICES TO OPERATION-INDIVIDUAL STUDENTS IN FOUR SCHOOLS

| School | Grade | Service    | Mode of Operation                                                                                                                                                                                    |
|--------|-------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A      | 9-10  | Supportive | Reading class divided into groups, each served sometimes by reading teacher and sometimes by an aide.                                                                                                |
| B      | 9-12  | Supportive | Reading class divided into groups, each served by reading teacher or by an aide.                                                                                                                     |
| C      | 9     | Intensive  | Reading class divided into groups, each served by reading teacher for basic reading skills or by an aide; in other subjects, regular teacher has an aide in classroom to assist individual students. |
|        | 10    | Supportive | Reading class served by reading teacher, with an aide available to prepare materials or assist individual students.                                                                                  |
| D      | 9     | Intensive  | Reading class served by reading teacher; in reading and other subjects, teacher has an aide in classroom to assist individual students.                                                              |
|        | 10    | Supportive | Reading class divided into groups, each served by an aide.                                                                                                                                           |

TABLE 2

FIRST-YEAR PARTICIPANTS IN OPERATION INDIVIDUAL MAKING VARIOUS  
GAINS IN GRADE-EQUIVALENT SCORE ON CTBS SUBTESTS  
BETWEEN OCTOBER 1976 AND APRIL 1977 (0.6 YEAR)

| GE Score Gain<br>(0.6 Expected) | Total Reading |       | Reference Skills |       |
|---------------------------------|---------------|-------|------------------|-------|
|                                 | N             | %     | N                | %     |
| More than 2.0                   | 75            | 20.4  | 106              | 28.7  |
| 1.6 - 2.0                       | 31            | 8.4   | 11               | 3.0   |
| 1.1 - 1.5                       | 47            | 12.7  | 32               | 8.6   |
| 0.6 - 1.0                       | 37            | 10.0  | 27               | 7.3   |
| Less than 0.6                   | 179           | 48.5  | 194              | 52.4  |
| Total                           | 369*          | 100.0 | 370*             | 100.0 |

\*Totals differ because of student absences on various test dates. This summary omits 56 ninth-grade students whose posttest scores were invalidated by procedural irregularities.

TABLE 3  
SECOND-YEAR PARTICIPANTS IN OPERATION INDIVIDUAL MAKING VARIOUS  
GAINS IN GRADE-EQUIVALENT SCORE ON CTBS SUBTESTS  
BETWEEN APRIL 1976 AND APRIL 1977 (1.0 YEAR)

| GE Score Gain<br>(1.0 Expected) | Total Reading |       | Reference Skills |       |
|---------------------------------|---------------|-------|------------------|-------|
|                                 | N             | %     | N                | %     |
| More than 2.4                   | 18            | 20.9  | 14               | 16.1  |
| 2.0 - 2.4                       | 14            | 16.3  | 3                | 3.4   |
| 1.5 - 1.9                       | 6             | 7.0   | 7                | 8.0   |
| 1.0 - 1.4                       | 16            | 18.6  | 11               | 12.7  |
| Less than 1.0                   | 32            | 37.2  | 52               | 59.8  |
| Total                           | 86*           | 100.0 | 87*              | 100.0 |

\*Totals differ because of student absences on various test dates.

TABLE 4

PERCENTAGE OF PARTICIPANTS IN OPERATION INDIVIDUAL MAKING  
EXPECTED GAINS IN GRADE-EQUIVALENT SCORE ON CTBS  
SUBTESTS BETWEEN PRETEST AND POSTTEST

| Group                         | Number of Students<br>Tested Twice* |         | Percentage Who Gained<br>Month for Month |         |
|-------------------------------|-------------------------------------|---------|------------------------------------------|---------|
|                               | Tot.Rdg.                            | Ref.Sk. | Tot.Rdg.                                 | Ref.Sk. |
| Grade 9, Intensive            | 134                                 | 135     | 56.0                                     | 50.4    |
| Grade 9, Supportive           | 134                                 | 134     | 49.3                                     | 53.0    |
| Grade 10, 1st Year in Project | 67                                  | 67      | 50.7                                     | 41.8    |
| Grade 10, 2nd Year in Project | 86                                  | 87      | 62.8                                     | 40.2    |
| Grades 11 and 12              | 34                                  | 34      | 44.1                                     | 26.5    |
| All Grade 9 Participants      | 268                                 | 269     | 52.6                                     | 51.7    |
| All Grade 10 Participants     | 153                                 | 154     | 57.5                                     | 40.9    |
| All Grades 11-12 Participants | 34                                  | 34      | 44.1                                     | 26.5    |
| All 1st-Year Participants     | 369                                 | 370     | 51.5                                     | 47.6    |
| All 2nd-Year Participants     | 86                                  | 87      | 62.8                                     | 40.2    |
| All Intensive                 | 134                                 | 135     | 56.0                                     | 50.4    |
| All Supportive                | 321                                 | 322     | 52.6                                     | 44.4    |
| All Participants              | 455                                 | 457     | 53.6                                     | 46.2    |

\*Some subtest numbers differ because of student absences on various test dates. This summary omits 56 ninth-grade students whose posttest scores were invalidated by procedural irregularities.



TABLE 5

PARTICIPANTS IN OPERATION INDIVIDUAL OBTAINING EXPECTED RATINGS  
IN CONTENT SKILLS AND RESPONSIBILITY SKILLS  
ON QUARTERLY SKILL RECORDS

| Group                    | Students<br>Rated<br>4 Times | Students Meeting Expectation* |                   |                        |                 |                 |                          |
|--------------------------|------------------------------|-------------------------------|-------------------|------------------------|-----------------|-----------------|--------------------------|
|                          |                              | Content<br>Skills             | Respon.<br>Skills | Both Sets<br>of Skills | Content<br>Only | Respon.<br>Only | Neither Set<br>of Skills |
| Intensive<br>Grade 9     | 207<br>(100%)                | 207<br>(100%)                 | 151<br>( 73%)     | 151<br>( 73%)          | 56<br>( 27%)    | 0<br>( 0%)      | 0<br>( 0%)               |
| Supportive<br>Grade 9    | 141<br>(100%)                | 109<br>( 77%)                 | 109<br>( 77%)     | 89<br>( 63%)           | 20<br>( 14%)    | 20<br>( 14%)    | 12<br>( 9%)              |
| Supportive<br>Grade 10   | 166<br>(100%)                | 156<br>( 94%)                 | 139<br>( 84%)     | 135<br>( 81%)          | 21<br>( 13%)    | 4<br>( 3%**)    | 6<br>( 4%)               |
| Supportive<br>Gr. 11-12  | 39<br>(100%)                 | 39<br>(100%)                  | 30<br>( 77%)      | 30<br>( 77%)           | 9<br>( 23%)     | 0<br>( 0%)      | 0<br>( 0%)               |
| Supportive<br>All Grades | 346<br>(100%)                | 304<br>( 88%)                 | 278<br>( 80%)     | 254<br>( 73%)          | 50<br>( 15%)    | 24<br>( 7%)     | 18<br>( 5%)              |

\*Students receiving supportive service were expected to earn at least one quarterly rating of "Gained some additional knowledge" or better in each specific content skill on the Skill Record for Reading, and/or at least one quarterly rating of "Good" or "Excellent" in each specific responsibility skill on the same instrument. Students receiving intensive service were expected to meet the same criteria on the Skill Records for at least 3 of the 4 subjects: Reading, Mathematics, English, and Social Studies.

\*\*The percentage 2.4 for Grade 10 was rounded upward to 3% to be consistent with the rounded 81% and 84% on the same line.

PRIMARY READING SKILLS CENTERS  
(A Component of the COMPREHENSIVE READING PROJECT)

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

The Primary Reading Skills Centers project provides remedial reading instruction to primary-grade children with deficiencies in reading skills.

#### RATIONALE

The participating pupils have failed to master basic reading skills and, therefore, are reading below grade level. The project is based upon the assumption that supplementary services can ameliorate low academic achievement resulting from reading difficulties. Services are provided to improve the comprehension and word-attack skills of the participating pupils.

#### EXPECTED OUTCOMES

It is expected that, through participation in the project, pupils will improve in reading-comprehension and word-attack skills.

#### PREVIOUS FINDINGS

Previous evaluations consistently indicated that project participants demonstrated gains in reading ability. From 1969 to 1975 at least 67% of the participating pupils met or exceeded the goal of gaining two instructional book levels per year, as measured by a group informal reading inventory, and there was a substantial increase from pretest to posttest in the percentage of pupils attaining mastery on the Botel Phonics Inventory.

In 1975-1976 the instructional reading levels of 56% of the project pupils increased at least two book levels in a year; the expected 90% increased at least one book level during the same period. The criterion for phonics mastery (a 20-point gain in the percentage of pupils achieving mastery) was exceeded by 26 percentage points. The alphabet-recognition criterion was met by 63% (not the expected 95%) of the first-grade pupils. Most pupils in Grades 2-4 demonstrated gains on the CAT-70 Reading Comprehension and Reading Vocabulary sections, with the average pupil meeting the criterion of one year's gains in comprehension but not in vocabulary. These results were considered educationally significant because extremely low scores in January 1975 had indicated pupils' relatively severe difficulties in reading.

## EVALUATION OF THE CURRENT YEAR

This year's evaluation of the Primary Reading Skills Centers project focused on the degree to which participating pupils (a) improved in reading achievement, as measured by a group informal reading inventory, (b) developed their word-attack skills, as measured by the Botel Phonics Inventory, (c) developed their alphabet-recognition skills, as measured by an alphabet-recognition test in first grade, and (d) improved in reading skills measured by the California Achievement Tests' (CAT-70) Reading Vocabulary and Reading Comprehension sections.

### IMPLEMENTATION

The project's intended mode of operation was fully implemented in both centers. The operation remained substantially the same as it had in previous years. Both teachers used a variety of teacher-made and commercial reading instructional materials and audiovisual equipment to enhance various reading skills. One paraprofessional aide assisted each teacher in individualizing instruction.

Using low pupil scores on the Scholastic Testing Service (STS) test, Informal Reading Inventory (IRI), and Botel Phonics Inventory and teacher recommendations as entry criteria, center teachers chose first to fourth graders to participate in the project. Analysis of pupils' reading difficulties showed most had major problems with word attack skills, sentence comprehension, and general study habits. Communication between project and classroom teachers included discussion of pupil problems, written reports to the classroom teacher, and notification of pupil progress on periodic testing.

Arranged in groups of seven to 20, pupils received an average of 20 to 60 minutes of intensive instruction per day. The two centers organized their student groups differently. The emphasis was on individualization in one center, where the teacher and aide actively guided each pupil through programmed materials. In the second center the teacher and aide worked with the large group for a part of the period, and then divided the class in half for smaller group instruction.

### ATTAINMENT OF OBJECTIVES

Objective 1: Participating pupils in first grade will develop their alphabet recognition skills to the extent that 95% will achieve a score of 50 on a 52-item Alphabet-Recognition Test administered in May.

This objective was not attained.

In May, 26 pupils in Grade 1 at the St. Stephen center took the 52-item Alphabet-Recognition Test. Twenty-one pupils (81%, not the expected 95%)

achieved the criterion score of 50 items correct. However, for this disadvantaged group, the large percentage of pupils achieving the 96% mastery level was educationally significant.

Objective 2: Participating pupils in Grades 2-4 will demonstrate gains in reading achievement so that their word attack skills improve to the extent that there is an increase of 20 points in the percentage of pupils attaining an 80% mastery score on the Botel Phonics Inventory between the September pretest and May posttest.

This objective was fully attained.

In September 1976 and May 1977 the Botel Phonics Inventory was administered to the 100 participating pupils in Grades 2, 3 and 4 in both centers. On the pretest, 39% of the pupils attained the specified mastery score; on the posttest 67% did so. The increase of 28 percentage points surpassed the expected 20-point increase by eight percentage points.

Objective 3: Participating pupils in Grades 2-4 will demonstrate gains in reading achievement so that their reading achievement levels increase to the extent that 90% of the pupils gain at least one book level and 60% gain at least two book levels between the September pretest and the May posttest on a group Informal Reading Inventory (IRI).

This objective was not attained.

Of the 99 pupils tested in September 1976 and May 1977, 71% (not the expected 90%) gained at least one book level. Also, 15% (not the expected 60%) gained at least two levels. However, for these pupils, who entered the centers with severe reading handicaps, these gains were educationally meaningful.

Objective 4: Participating pupils in Grades 2-4 will demonstrate gains in reading achievement so that their vocabulary knowledge and reading comprehension skills increase to the extent that there is, in one year, a one-year gain in average Grade Equivalent (GE) on the Total Reading score of the CAT-70 administered each January.

Because of the small number of pupils tested due to administrative problems, it could not be determined whether the objective was attained.

At the St. Stephen Center, 16 (of 52) pupils currently in Grades 2, 3, and 4 were tested in January 1976 and January 1977. Pupils in all grades demonstrated gains in mean GE score, with an average gain of .8 (slightly below the expected 1.0 gain). The pupils at the St. Columba Center were not tested because of administrative difficulties.



## SUMMARY AND CONCLUSIONS

As in previous years, full implementation at both sites again occurred in the Primary Reading Skills Centers project. Generally, project pupils demonstrated gains in reading ability.

Eighty-one percent (less than the expected 95%) of first-grade pupils tested at the St. Stephen Center achieved the 96% mastery criterion on the Alphabet Recognition Test. The Botel Phonics mastery criterion (a 20-point gain in the percentage of pupils achieving an 80% mastery level) was exceeded by eight percentage points (or a total gain of 28 percentage points).

Based on the Informal Reading Inventory scores, the instructional reading levels of 71% of participating second- through fourth-grade pupils increased at least one book level during the year; 15% increased at least two book levels during the same time. Although the goals (90% of the pupils to gain one level and 60% to gain two levels) were not reached, the gains were substantial enough to be considered educationally significant for this disadvantaged population.

Sixteen pupils in Grades 2-4 who were tested at the St. Stephen Center demonstrated an average gain of .8 year in GE in the CAT-70 Total Reading score from January 1976 to January 1977. However, the small number of pupils tested, due to administrative problems, did not allow evaluators to draw a conclusion regarding the attainment of the mastery criterion (i.e., a gain of one year in GE).

Thus, the project was successful in helping most pupils at both Centers, all of whom initially exhibited relatively severe reading difficulties, to acquire some basic reading skills and demonstrate measureable improvement in reading achievement.



READING IMPROVEMENT THROUGH TEACHER EDUCATION  
(ESEA TITLE I COMPONENT)  
(A Component of the COMPREHENSIVE READING PROJECT)

The RITE project is designed to help train urban elementary school teachers to diagnose reading problems and to design and implement effective developmental reading programs. Teachers practice new techniques in their classrooms; on-site follow-up is provided by the project staff.

RATIONALE

The reading and language-arts deficiencies of Title I children are well documented. In order to help these children become successful learners, teachers should have a wide range of experience with various reading techniques and materials. Because many teachers lack this experience, the project supplements their preservice training with in-service training programs specifically designed to meet the reading needs of teachers of urban school children.

EXPECTED OUTCOMES

With the help of the project specialists, teachers should develop competence in using the Directed Reading Activity (DRA) approach, in diagnosing the individual pupil's reading needs, in prescribing independent activities for the pupil, and in utilizing efficient classroom-management techniques.

PREVIOUS FINDINGS

Evaluation of RITE during its first year of operation was formative and focused on the implementation of services. Project records indicated that RITE was delivering the types of services which should improve teachers' skill in reading instruction. Principals' ratings of the specialists and the project as a whole indicated satisfaction with their effectiveness.

Subsequent evaluations focused on the effect of RITE services on specific teacher competencies. Results of observations, the RITE Case Study, and the RITE Teacher Rating Scale indicated that teachers receiving these services were managing their reading lessons effectively and (at least at the primary level) seemed able to make use of test results in teaching reading. With beginning teachers, the project's greatest success was in DRA implementation and reading-lesson management. There was some evidence of success in developing the beginning teachers' skills in diagnosing and prescribing and in providing varied and individualized independent reading activities.

## EVALUATION OF THE CURRENT YEAR

This year's evaluation of the RITE project examined the effect of the project's services on specific teacher competencies by fall and spring administrations of formal assessment measures (observational instruments and case studies) to beginning teachers and kindergarten teachers.

### IMPLEMENTATION

The project's planned mode of operation was fully implemented.

Contact Frequency Reports compiled by project staff indicated that the seven RITE specialists made 994 half-day visits to participating schools from September 1976 to April 1977. During these visits the staff held 1,347 conferences with principals, school reading coordinators, and other administrators. They also provided personalized consultation on reading instruction to teachers during 3,318 individual service contacts. Thirty beginning teachers received 704 (21%) of the contacts.

The two RITE kindergarten specialists made 319 half-day visits to kindergartens in project schools, during which they provided personalized service contacts to teachers in the forms of individual observations, demonstrations, and conferences. The contacts were divided into the following categories: listening and language skills (28%), diagnosis and prescription (17%), grouping (14%), room arrangement (10%), visual displays (9%), curriculum planning (9%), classroom routines (8%), and use of paraprofessional help (5%).

As part of in-service development, RITE specialists also conducted 70 group meetings. There were two reading seminars for beginning teachers, six half-day meetings for kindergarten teachers, four cluster workshops for all project teachers, and 58 individual-school group sessions.

### ATTAINMENT OF OBJECTIVES

Objective 1: During the current school year the RITE staff will provide at least 1,800 individual service contacts to teachers in the areas of: reading approaches, diagnosis and prescription, varied independent activities, and reading lesson organization and management. A service contact is defined as a scheduled conference, an observation, or a demonstration. Project staff will complete Contact Frequency Reports every two (2) months.

This objective was attained.

In Contact Frequency Reports completed every two months, project staff indicated that there were 4,888 individual service contacts to teachers from

September 1976 to April 1977. Contacts covered the areas of reading approaches (40%), diagnosis and prescription (22%), varied independent activities (10%), and reading lesson organization and management (28%).

The large number of individual service contacts, in excess of the stated criterion, indicated a constant and ongoing instructional relationship between staff and participants. Also, all important skill areas designated in the objective were addressed by the staff.

Objective 2: Kindergarten teachers receiving RITE services will improve their instructional skills so that they are able to: (a) diagnose and prescribe for individual pupil reading-readiness needs, (b) provide useful and varied activities for extending children's listening and language skills, and (c) organize and manage their classroom readiness programs. It is expected that there will be a statistically significant increase in the sampled teachers' posttest scores over the pretest scores on the RITE Kindergarten Observational Rating Scale (KORS) (covering areas (a), (b), and (c)).

This objective was fully attained.

In the fall and again in the late spring a sample of ten out of the 27 participating teachers (37%) were observed, interviewed, and then scored on the 32-item KORS. The KORS was designed to register changes in teacher instructional skills to the extent stated in the objective, and included the following sections and subsections: A. Diagnosis and Prescription for individual pupil reading readiness needs (emphasizing use of the Santa Clara Inventory of Developmental Tasks), B. Listening and Language Skills Activities, and C. Organization and Management of Classroom readiness programs: 1. Room Arrangement, 2. Visual displays, 3. Routines, 4. Curriculum Planning, and 5. Grouping.

Pretest and posttest scores were analyzed by means of the chi-square test and a statistically significant increase ( $\chi^2/\text{square} = 2$ ,  $df=1$ ,  $p < .01$ ) was found in the average of the teachers' scores from pretest to posttest on the Scale. In fact, every teacher received a higher rating on the posttest than on the pretest, and nine out of ten teachers improved on each section and subsection of the Scale. The remaining teacher improved on all but one section (Diagnosis and Prescription).

These results demonstrated that kindergarten teachers receiving RITE services significantly improved their abilities to diagnose and prescribe for pupils' reading readiness needs, create attention-getting listening and language skills activities, and efficiently organize and manage their classroom readiness programs.

Objective 3: Beginning teachers who receive RITE services during the school year will demonstrate increasing knowledge of the procedures of the DRA and increasing ability to interpret available test data as a basis for diagnostic-prescriptive teaching. This will be indicated by the median teacher's meeting the criterion for mastery on both sections of the RITE Case Study Instrument.

Because of the small number of returns of the RITE Case Study Instrument (6 out of 15 from the total population of 30), it could not be determined whether the objective was attained.

However, on the Using Test Scores section, the median teacher received a score of 4, achieving mastery (or 4 out of 6 correct). In addition, four out of the six teachers tested achieved or surpassed the mastery criterion.

On the Using a DRA section, the median teacher scored 5.5, not meeting the mastery criterion (or 8 out of 12). Two of the six teachers successfully surpassed the mastery criterion.

The RITE Case Study was designed to analyze and assess teachers' knowledge of two components of reading instruction: ability to perform a directed reading activity (DRA) and to interpret and use reading test scores to plan reading lessons. (A DRA is a systematized method of reading instruction emphasizing the following steps: (1) Readiness-motivation, (2) Guided silent reading, (3) Skill development, (4) Rereading-oral and/or silent, and (5) Follow-up extension.)

Both the primary (Grades 1-3) and intermediate (Grades 4-6) forms of the Case Study presented teachers with simulated problem situations in teaching reading (Using a DRA section) and interpreting reading test scores (Using Test Scores section). The teachers then received the Case Studies in the mail, in May, wrote their answers to the problems (describing the procedures they would use in their classrooms), and returned them.

Each respondent's answers (without respondent's identification) were scored by the same panel of four RITE staff members, using predetermined keys. Scores for the DRA and Test sections for each respondent were the averages (medians) of ratings given by the four RITE staff members.

Then, using previous years' scores and their own judgment and expectations of the teachers' knowledge gain, the raters decided on a mastery criterion of 66%. The maximum possible score for the Using a DRA section was 12. Test scores for five primary and one intermediate teacher ranged from 4 to 12. For the Using Test Scores section, the maximum possible score was 6. Test scores ranged from 1 to 6.

The median score for the Using a DRA section was 4 and for the Using Test Scores was 5.5 (mastery scores were 4 and 8, respectively). However, because of the small number of teachers returning the Case Study, it could not be determined whether the mastery objective had been attained.



## SUMMARY AND CONCLUSIONS

The RITE project's intended mode of operation was fully implemented. In its elementary school component, RITE reading specialists provided in-service training through workshops and individual consultation to hundreds of primary and intermediate grade teachers. They also assisted principals and reading coordinators organize their school reading programs. RITE kindergarten specialists trained teachers to enhance pupils' reading readiness through workshops, meetings, and individual service contacts focusing on readiness-skill instruction.

Review of Contact Frequency Reports revealed the RITE staff successfully completed almost 5,000 individual service contacts to elementary and kindergarten teachers pertaining to specific reading-instruction skills.

Systematic observation of kindergarten classrooms demonstrated that the project was successful in helping teachers diagnose and prescribe for readiness needs, create activities to extend pupils' listening and language skills, and organize and manage classroom readiness programs.

Because of the small number of returns of the RITE Case Study Instrument, it could not be determined conclusively whether elementary grade teachers had acquired mastery of skills needed to use reading test results and plan a Directed Reading Activity.

Evaluators observed a high quality and quantity of reading consultation services being provided by RITE staff specialists as well as an enthusiastic reception of these services by project teachers and administrators.

The project's impact was also demonstrated by the noticeable positive changes in teaching behavior (in reading approaches, diagnosis and prescription, creation of independent activities, and classroom organization and management) by project participants. The RITE project, characterized by intensive group and individual inservice training, continued to meet its goals of ongoing improvement in reading and reading readiness instruction.



SUMMER READING READINESS  
(A Component of the COMPREHENSIVE READING PROJECT)

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

The Summer Reading Readiness project is designed to provide formal learning experiences for two groups of children: (a) children about to enter the first grade, and (b) children who have completed the first grade with less-than-satisfactory academic achievement. The project attempts to strengthen in these children those readiness skills required for success in the relatively structured primary-grade reading program.

RATIONALE

Kindergarten-age children lack the readiness skills prerequisite to success in school because of a limited experiential background. Their limited cognitive skills and concept development require expansion and enrichment for successful transition into the reading program in Year 1. Many children who have completed Year 1 have weaknesses in specific decoding skills which require development to prevent a further deterioration in their achievement levels in Year 2.

EXPECTED OUTCOMES

The primary goal of the project is to provide appropriate learning experiences designed to develop a stable foundation of readiness skills for children entering the first grade of formal schooling. A second goal is the remediation of reading-readiness deficiencies of children who have had unsuccessful first-grade experience.

PREVIOUS FINDINGS

During the summer of 1972, participating children who attended with regularity made significant improvement in reading-readiness and basic reading skills. Follow-up interviews with teachers revealed that participating children differed from non-participating children in achievement levels and classroom performance in Year 1.

During the summer of 1973, the difference between mean pretest and posttest scores on the Philadelphia Readiness Test was statistically significant, indicating that the objective of developing readiness skills of pre-first-grade children had been attained.

The 1974 evaluation focused upon the development of aural comprehension skills in pre-first-year pupils and the strengthening of reading-readiness skills in underachieving first-year pupils. The expected proportion of pupils attaining

mastery was not reached by either group. The appropriateness of the criteria of success and the reasonableness of the expected proportions of pupils attaining mastery were questioned. In 1975 and 1976, revised objectives were attained.

#### EVALUATION OF THE CURRENT YEAR

This year, evaluation of the Summer Reading Readiness project again focused upon the development of aural comprehension skills in pre-first-year pupils, and upon the strengthening of reading-readiness skills in pupils who were not successful in their first-year experience.

#### IMPLEMENTATION

The Summer Reading Readiness project was fully implemented in harmony with the Title I Application.

With the exception of a first-day training session for the teachers and the July 4 holiday, the project directly served eligible children five mornings a week for six weeks. Highest priority for participation was given to children without first-grade experience; second priority was given to children who had had less-than-successful experience in first grade.

Preregistration in mid-May attracted 1,697 children from public and nonpublic schools; the project was actually attended by 1,458 children. In regular visits during the first two weeks, the project's three supervisory teams found 1,213 children present at the 35 participating schools.

When a member of the evaluation team observed 27 classrooms at 7 schools, pupil attendance ranged from 5 to 14 per room and from 18 to 74 per school. In most instances, group oral drills and individual motor-coordination practice were observed being supplemented with well-planned gamelike learning activities; the children were experiencing both "school" and "fun." Excellent rapport between the children and their teachers was evident to the observer.

Children were typically in three classroom groups per school, each group having its own teacher and generally including children of only one priority classification; six of the schools had six groups each instead of three. At some schools, older elementary-grade pupils served as voluntary helpers.

#### ATTAINMENT OF OBJECTIVES

Objective 1: At the conclusion of the six-week project term, at least 60% of the pre-first-grade pupils who attend at least 75% of the project sessions will have acquired skills in aural comprehension (such as abilities to pay attention to, organize, infer from, and retain what has been heard) as indicated by the attainment of a score of at least 18 correct items out of 28 on Part 4, Aural Comprehension, of the Stanford Early School Achievement Test (SESAT).

This objective was fully attained.

The SESAT was administered to Priority 1 pupils by their teachers during the final week of the project. Although scores for the entire battery were recorded for future use by the respective schools, only the Part 4 scores were used for project evaluation.

SESAT results for the Priority 1 pupils are shown in the second column of Table 1. Fifty-four children, although they were present at least 21 of the 28 days, had no Part 4 scores reported, possibly because of absence on one or more of the three testing days. Of the 669 pupils who were present at least 21 days and had Part 4 scores, 68.0% had scores of at least 18 correct items. This percentage surpassed the minimum expectation of 60%. Of the 35 schools, 26 had or exceeded the 60% success rate.

Objective 2a: At the conclusion of the six-week project term, at least 60% of the underachieving first-grade pupils who attend at least 75% of the project sessions will have improved their basic reading-readiness skills to the extent indicated by mastery of consonants and vowels specified for their respective entry levels, such mastery recorded on the project's Diagnostic Profile.

This objective was not attained.

The Diagnostic Profile consisted of 74 elements (single consonants or vowels in various contexts) grouped to comprise 5 developmental levels. In May, the first-grade teacher circled the elements the pupil had not yet mastered; in the final week of the project, the child's summer teacher checked (on the same form) the elements that were mastered since the May circling. For the summer, entry level was defined as the lowest level in which the child had not mastered (in May) at least 85% of the elements. Expected growth during the summer was on a sliding scale keyed to the individual's entry level.

Results on the Diagnostic Profile for the Priority 2 pupils are shown in the third column of Table 1. Seventy-nine children, although they were present at least 21 days, had no usable profiles, because either they were absent on a testing day, the May profiles were incomplete, the summer teacher did not follow directions on the profile, or the school submitted forms adapted to its Distar reading program instead of the regular Diagnostic Profiles.

Of the 204 pupils who were present at least 21 days and had usable Diagnostic Profiles, 56.9% made the amount of progress specified for their respective entry levels. This percentage fell short of the minimum expectation of 60%. Of the 27 schools that submitted usable profiles, 13 had success rates of at least 60%.

Of the 53 pupils who entered the project at Level 1, 40% succeeded; of the 52 at Level 2, 48% succeeded; of the 27 at Level 3, 56% succeeded; of the 44 at Level 4, 68% succeeded; and of the 28 at Level 5, 89% succeeded in making the gain specified for their level.



Objective 2b: At the conclusion of the six-week project term, at least 60% of the underachieving first-grade pupils who attend at least 75% of the project sessions will have improved their basic reading-readiness skills to the extent indicated by recognition of at least 15 new words (or mastery of the entire list) on the Sight Word List.

This objective was fully attained.

The Sight Word List consisted of 60 preprimer and primer words to be presented on flash cards for immediate recognition (pronunciation) by the pupil. In May, the first-grade teacher circled the words the pupil had not yet mastered; in the final week of the project, the child's summer teacher checked (on the same form) the words that were mastered since the May circling. Pupils who had 15 or more words circled (unmastered) in May were expected to have at least 15 of those words checked (mastered) at the end of their project experience; pupils with less than 15 words circled were expected to master all of them.

Results on the Sight Word List for the Priority 2 pupils are shown in the last column of Table 1. Thirty-nine children, although they were present at least 21 days, had no usable word lists, because either they were absent on a testing day, the May forms were incomplete, the summer teacher did not follow directions on the form, or the school used a list of words that differed from the regular Sight Word List.

Of the 244 pupils who were present at least 21 days and had usable Sight Word Lists, 72.5% made the specified amount of progress. This percentage surpassed the minimum expectation of 60%. Of the 29 schools that submitted usable word lists, 22 had success rates of at least 60%.

Of the 150 pupils who entered the project with at least 15 words circled, 72% succeeded; of the 94 with fewer than 15 words circled, 73% succeeded.

#### SUMMARY AND CONCLUSIONS

Fully implemented in a manner consistent with the Title I Application, the Summer Reading Readiness project enabled 1,011 pre-first-grade children and 447 low-achieving first graders to participate in its six-week program at 35 non-public schools. Well-planned educational "fun and games" combined with occasional more formal learning exercises were designed to enhance the children's readiness for the learning tasks of the first or second grade they would enter in September.

The project attained its stated objective for the pre-first-grade children, and one of its two objectives for the low-achieving first graders. Each objective expected 60% of the pupils to meet its respective criterion. Of the preschoolers who attended at least three fourths of the project sessions and took the SESAT Aural Comprehension subtest, 68% earned the specified score of at least 18 correct



items. Of the pupils with first-grade experience who attended at least three fourths of the project sessions and were rated on the project's Diagnostic Profile and/or its Sight Word List, 73% made the specified gains in word recognition and 57% did so in the mastery of single consonants and vowels in various contexts. Thus, many children were able to enter the new school year with improved reading and readiness skills after their summer experience in this project.

TABLE 1

PUPIL PARTICIPATION AND SUCCESS IN 1977  
SUMMER READING READINESS PROJECT

| Item                         | Pre-First-Grade Pupils (Priority 1) |                    | Post-First-Grade Pupils (Priority 2) |          |
|------------------------------|-------------------------------------|--------------------|--------------------------------------|----------|
|                              | 1                                   | 2                  | 3                                    |          |
| No. of Pupils Preregistered  | 1,056                               |                    |                                      | 641      |
| No. Present at Least Once    | 1,011                               |                    |                                      | 447      |
| No. Present at Least 21 Days | 723                                 |                    |                                      | 283      |
| Applicable Objective         | 1                                   | 2                  | 3                                    |          |
| Evaluation Instrument        | SESAT, Part 4                       | Diagnostic Profile | Sight Word List                      |          |
| No. of 21-Day Pupils Tested  | 669                                 | 204                |                                      | 244      |
| No. Who Met Criterion        | 455                                 | 116                |                                      | 177      |
| % Who Met Criterion          | 68.0%                               | 56.9%              |                                      | 72.5%    |
| At Least 60%?                | Yes                                 | No                 |                                      | Yes      |
| No. of Schools at Least 60%  | 26 of 35                            | 13 of 27           |                                      | 22 of 29 |

## COMPUTER ASSISTED AND MANAGED INSTRUCTION

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

Computer-managed instruction (CMI) facilitates individualized competency-based instruction in reading and mathematics by applying computer technology to instructional management (diagnosis of needs, prescriptions for instruction, and frequent progress assessments) and to actual instruction at a computer terminal.

### RATIONALE

The underlying philosophy of CMI recognizes the importance of individual differences in providing experiences which enable development of each individual's potential. Educators generally agree that when unique experiences are provided for each pupil, the chances of school success are enhanced. This approach has not been adopted widely because of the difficulties encountered when more than a few pupils receive instruction. Among the problems that must be overcome to implement an individualized program are management of the assorted instructional materials, the extensive variety of possible prescriptions, and the record of performance for each pupil. Computer technology provides both the structure and the flexibility to overcome these difficulties of individualization within a mass-education system.

### EXPECTED OUTCOMES

The goal of the project is to raise the achievement of participating pupils in reading to a higher level than would normally be expected in the schools. It is expected that a high proportion of pupils will show mastery of the respective skills as they move through the instructional sequences.

Staff-development sessions and frequent classroom visits by the CMI curriculum specialists are expected to assist participating teachers in individualizing instruction in their classrooms.

### PREVIOUS FINDINGS

Past evaluations of the three predecessor projects (Computer-Assisted Instruction, Instructional Management, and Teaching Basic Reading Skills--A Systems Approach) generally showed that, where the projects were appropriately implemented, participating pupils had significantly greater achievement than comparison pupils. The evaluations documented that the individualized activities did provide learning experiences which the pupils were able to master at desired rates, as indicated by both the projects' internal monitoring systems and external criterion tests.

Teachers' and pupils' attitudes toward the projects were found to be positive. In general, teachers viewed the computer as an excellent motivational device which enabled their pupils to succeed in formal learning. Also, the teachers felt that without the computer's record keeping and scheduling, individualization of instruction would not be possible in their classrooms.

#### EVALUATION OF THE CURRENT YEAR

Because of extensive revision of the project's secondary reading and primary mathematics components, the current evaluation included formative elements, seeking to determine the effectiveness of the various instructional sequences in having pupils attain specified rates of mastery on criterion-referenced tests. Criteria were also established for pupil achievement in reading as measured by a phonics inventory and informal reading inventories.

#### IMPLEMENTATION

During 1976-1977 the project implemented and/or maintained two primary-grade reading centers, three secondary-grade reading centers, four primary-grade mathematics centers and five mathematics and language arts reinforcement centers. In the centers the computer was used to assist the center teachers in the management of instruction (diagnosis of needs, prescriptions for instruction, and frequent progress assessments) and to provide actual instruction at a computer terminal.

The two primary-grade reading centers provided individualized multimedia instruction to a total of approximately 300 children in the two schools, as observed during the evaluator's bi-weekly visits. All eight computer terminal cassette-player stations were operational in each center during more than 95% of the observations. The high rate of initial success on the on-line activities experienced by participating children last year (over 80% of the instructional units attempted were passed on the first attempt) was evident again this year in both the internal computer reports and the high frequency of "Smokey Bear" (an on-screen reward for attaining mastery of individual tapes) observed by the evaluator. The internal computer reports, which show how pupils perform on all on-line activities taken, indicated that this year's participating children were able to successfully complete on the first attempt 2,869 of 3,382 (79.4%) decoding activities and 2,758 of 3,435 (80.2%) comprehension activities. To put this in perspective, the reader should know that individual activities or "units" are comprised of as many as 12 separate 10-12 minute sub-activities at the computer terminal, thereby providing sufficient reading activities for daily on-line experiences matched to individual activities of Book A through Book G (approximately book level 3<sup>2</sup>) of the Stearn Reading Series. Generally, the on-line activities were designed both to reinforce skills taught in regular classroom instruction and to remediate skills not yet learned. As part of this year's activities, the staff extended the program upward to include levels F and G of Stearn.



For the secondary-grade reading component, project activities focused on starting a second center and making necessary revisions of instructional materials shown to be not effective by the internal computer reports. Start-up activities for the second center included approximately a month of full-time teacher support by the curriculum specialists in areas such as operation of the computer terminals and management of the individualized center program. Revision of instructional materials primarily involved rewriting and reorganizing sequences, and adding commercially prepared materials. Preliminary feedback from the center teachers indicates that the revisions were successful.

The primary-grade mathematics component operated in five schools. In three schools, pupils received individualized mathematics-skill reinforcement through the "Drill and Practice" computer program while in the other two schools computer-managed centers provided remediation of participating pupils' mathematics-skill deficiencies below their instructional level. Although the teachers see only 15 pupils at a time, they reported that without an aide it is virtually impossible to provide sufficient service to all of the children, who are severely disadvantaged in terms of their mathematics skills.

Five mathematics and language-arts reinforcement centers operated in four schools. Individualized instruction was prescribed through assessment of both cognitive skills and individual pupil characteristics. This component was generally used to supplement the regular reading, mathematics, and social studies programs in the schools and to provide pupils with independent study skills.

#### ATTAINMENT OF OBJECTIVES

Objective 1: To teach primary-grade pupils the basic skills of decoding and comprehension, study skills, and appreciation for literature, so that participating pupils will evidence (a) mastery of 80% of the Read-On Criterion Tests taken, (b) mastery of the appropriate levels of the Sight and Sound Phonics Inventory, and (c) an average gain of two reading levels through level 8 and one level thereafter as measured by a group informal reading inventory.

This objective was partially attained. Participating primary-grade pupils surpassed both expected rates of mastery on the Read-On Criterion Tests and expected gain on the group informal reading inventory, but did not meet all expected rates of mastery on the Sight and Sound Phonics Inventory at the various grade levels.

The project's internal computer reports showed that of the 1,415 Read-On Criterion Tests taken by the 312 participating primary-grade pupils as a part of the instructional sequence, 1,339 (95%) were passed on the first attempt following completion of the prescribed reinforcement/remediation activities, thus exceeding the 80% criterion.

Participating pupils in one center were given the Sight and Sound Phonics Inventory in June 1977 as part of their district's reading program evaluation. The Inventory is administered in a large group using a multiple choice machine scored answer form. The test has two forms for primary grades which test progressively more complex phonics skills. Criteria were established by grade for the percentage of pupils expected to master the respective forms (A and B). As Table 1 shows, only the third graders taking Form B failed to come close to the expectations, while the second graders just missed the respective criterion for Form A.

The center teacher administered a group informal reading inventory in September and in June using the American Book Company Reading Series materials. Criteria were established in terms of the number of reading levels which the pupils were expected to gain from September to June -- two levels through level 8 (Book 3<sup>2</sup>) and one level thereafter. For the purposes of analysis and reporting, all upper level gains (beyond level 8) were converted to a uniform scale of 2 levels per year's growth. The 112 pupils tested at both times showed an average gain of 2.3 levels for the year, thereby exceeding the criterion for one year's growth.

Objective 2: To teach intermediate and secondary grade pupils basic skills in reading so that they will evidence (a) mastery of 70% of the Reading Competency Tests taken, (b) mastery of 90% of Form B tests and on the average three subtests of Form C of the Sight and Sound Phonics Inventory, and (c) an average gain of two reading levels through level 8 and one level thereafter as measured by the Secondary Reading Inventory.

This objective was partially attained. Participating secondary-grade pupils attained mastery of the Philadelphia Reading Competency Tests at the expected rate, but did not attain mastery of all specified parts of the Sight and Sound Phonics Inventory at the expected rate; reliable data were not available to determine attainment of the expected gains on the Secondary Reading Inventory.

As part of the secondary-grade reading center's program, the participating seventh and eighth graders were administered computer scored versions of the Philadelphia Reading Competency Tests after completion of the required instructional materials for the respective levels. Each level test was constructed of several subtests designed to measure pupil mastery of the respective decoding and comprehension skills. Examination of the project's internal computer reports showed that of 1,934 subtests taken, 1,481 (76%) were passed on the first attempt following instruction. Pupils were almost equally successful on the decoding and comprehension tests (846 of 1,114 and 635 of 820 respectively).

Forms B and C of the Sight and Sound Phonics Inventory were administered by the center teacher in June. Form C tests progressively more difficult advanced phonics and structural analysis skills. The criteria established specified that 90% of the pupils would show mastery of Form B and average three subtests (of nine) mastered on Form C. The teacher's records showed that 24 of 29 pupils (83%, not the expected 90%) mastered Form B and 30 pupils averaged 3.1 subtests mastered on Form C.

Since the experimental version of the Secondary Reading Inventory was used as part of the respective district's evaluation activities, the number of reading levels gained could not be determined.

Objective 3: To teach primary-grade pupils the fundamentals of arithmetic so that the average pupil will reinforce or remediate 15 arithmetic skills below their instructional level as measured by mathematics skills tests administered as part of the program.

This objective was not attained.

As part of the primary-grade mathematics centers program, participating pupils were given computer scored versions of the Philadelphia Mathematics Evaluation Tests on completion of the required instruction for the respective mathematics levels. Based on limited experience in the previous year, a criterion of 15 arithmetic skills for the average participating pupil was established. However, by June the 110 primary-grade children had shown mastery of an average of 2.2 arithmetic skills. Attendance by the children once per week and lack of classroom aides in the centers to assist the teachers were cited by the project staff and center teachers as the reason for the discrepancy.

#### SUMMARY AND CONCLUSIONS

In fully implementing all of its components, the Computer Managed Instruction project has provided both the structure and the flexibility to enable participating schools to implement individualized programs of instruction on a relatively large scale. The computer was used to help teachers manage the large assortment of instructional materials, prescribe instruction for individual pupils and evaluate pupil progress, and to provide on-line activities for pupils at a computer terminal. By providing experiences prescribed by individual pupil needs, the project was able to help participating children learn specific reading skills at a high rate of success. Participating children also learned arithmetic skills at the primary level and study and social studies skills at the secondary level.

The objective to have primary-grade pupils achieve specified rates of mastery on criterion-referenced tests, a phonics inventory and a group informal reading inventory was partially attained. Expected rates of mastery on the Read-On Criterion Tests were surpassed. Pupils generally showed a high rate of mastery on the Sight and Sound Phonics Inventory, although not always at the level expected. The expected year's growth on the group informal reading inventory was exceeded.

The objective to have secondary-grade pupils achieve specified rates of mastery on criterion-referenced tests, a phonics inventory and a reading inventory was partially attained. The pupils attained mastery on the Philadelphia Reading Competency Tests at the rate expected. They also showed a high rate of mastery on the Sight and Sound Phonics Inventory, but not always at the level expected. Attainment of the specified gain on the reading inventory could not be determined because an experimental instrument was used in the school's testing program.

The objective to have primary-graders achieve mastery of 15 arithmetic skills was not attained. According to the staff and teachers, pupils spent too little time in the center and the assistance of an aide was required to attain this goal.

Overall, the project provided effective learning experiences for eligible pupils in primary- and secondary-grade reading, and in primary-grade mathematics, although at a much reduced rate of exposure. These results should be viewed from the perspective that project teachers generally received the more needy children in their schools, yet were able to help these children master the respective skills, frequently at the expected high rates of success.



TABLE 1  
PERCENTAGE OF CMI PUPILS ATTAINING MASTERY  
ON TWO FORMS OF THE SIGHT AND SOUND  
PHONICS INVENTORY, JUNE 1977

| Grade | Test Form A        |                       |                     | Test Form B        |                       |                     |
|-------|--------------------|-----------------------|---------------------|--------------------|-----------------------|---------------------|
|       | Pupils Taking Test | Expected Mastery Rate | Actual Mastery Rate | Pupils Taking Test | Expected Mastery Rate | Actual Mastery Rate |
| 1     | 21                 | 70%                   | 81%                 | 0*                 |                       |                     |
| 2     | 46                 | 85%                   | 83%                 | 24                 | 80%**                 | 92%                 |
| 3     | 18                 | 90%                   | 100%                | 18                 | 80%***                | 22%                 |

\*Tested skills not taught in first grade.

\*\*Mastery of 3 of the 6 subtests.

\*\*\*Mastery of 4 of the 6 subtests.

## COUNSELING SERVICES

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

Each participating nonpublic school is served by a team of counselors for a portion of each week. One member of the team is an educational consultant; the other is a community consultant.

### RATIONALE

Many children fail to achieve their potential in school because their emotional or social problems develop to such an advanced state that adjustment and performance in school are seriously impaired. Individual diagnostic and remedial measures then become necessary to restore the children to an adequate functioning level.

The school and the home must cooperate in fostering the children's proper development. With appropriate preventive measures, many of their problems can be alleviated before they become major problems. The Counseling Services project (CSP) provides remedial and preventive services when needed by Title-I-eligible children in participating schools.

### EXPECTED OUTCOMES

It is expected that project services will help to prevent the development of chronic emotional, social, or academic disability in participating children, and will help to alleviate the children's existing problems.

### PREVIOUS FINDINGS

Evaluations prior to 1971-1972 revealed that the project was established in 14 nonpublic schools. Questionnaire data suggested that greater community involvement and more effective counseling schedules were needed to meet the many requests for CSP services. In 1971-1972 all CSP teams provided individual testing, counseling, and consulting services for pupils with psychological problems, and small-group discussions, in-service training, and individual consultations for teachers of Grades K-3. Participating school personnel who were interviewed expressed satisfaction with the help their children received, and a desire for permanent CSP services in their schools.

In 1972-1973, two major changes were made in the project's operation: (a) rather than being restricted to lower elementary grades, the project was made

available to all grades in participating schools; (b) rather than providing services on a prescribed basis, the project provided services as requested by individual schools. Nearly all staff members who were interviewed felt the project was more valuable during 1972-1973 than it had been the previous year.

Each year since 1972-1973, the project provided psychodiagnostic services for more than 350 pupils, subsequent remedial help for more than 325 pupils, and preventive psychological services for more than 2,000 pupils, 75 teachers, and 400 parents. CSP met all of its stated objectives and was enthusiastically received by pupils, parents, and teachers.

### EVALUATION OF THE CURRENT YEAR

During the current school year, evaluation again focused on CSP's diagnostic, remedial, and preventive activities.

### IMPLEMENTATION

The project's intended mode of operation was partially implemented. Counseling service was provided in all schools throughout the year. However, due to reductions in staff, the amount of weekly service to participating schools was reduced -- only one school received 2½ days of service from a 2 member team (the standard in previous years).

Project activities in the schools focused on the satisfactory disposition of all outstanding cases and the phasing-out of services. The types of services specified in the project's objectives were of secondary concern and were provided to a more limited extent than in past years.

### ATTAINMENT OF OBJECTIVES

Objective 1: During the school year, the project staff will provide psychodiagnostic testing and evaluation for at least 270 pupils referred for academic, emotional, or social problems; and they will provide remedial counseling help to at least 225 pupils identified as having academic, emotional, or social difficulties. Project staff will complete an individual Case Record Form for pupils referred for these services.

This objective was attained.

The evaluators asked CSP personnel to keep a case-record form for each referred pupil, summarizing the type of referral, methods of diagnosis and treatment, and disposition of the case. These revealed that there were 916 instances of psychodiagnostic services provided for 617 pupils. Pupils were

referred to the CSP staff because of behavioral (47%) academic (40%), physical (2%), and other (11%) problems. Many were referred for more than one kind of problem.

Data summarized from case-record forms revealed that 27% of the 2,097 remedial services provided were consultations with educators, 37% were counseling of individual students, and 8% were family counseling. Group counseling accounted for 8% of the remedial services, classroom observations for 4%, and various tutoring services for 1%. The remaining 15% of the services were divided evenly between referrals to agencies and learning therapy.

Objective 2: During the school year, the project staff will provide an individualized learning therapy program for at least 30 pupils identified as having severe disabilities. It is expected that 50% of these pupils will gain at least one book level, from pretest until posttest, on an Informal Reading Inventory. The project staff will complete an Individualized Learning Therapy Case Record Form for each student receiving this service.

This objective was not attained.

Learning therapy services were provided only 13 pupils. This service was not as fully provided as in previous years because of staff reductions.

Objective 3: During the school year, the project staff will provide preventive psychological services (such as group discussions to foster academic motivation, self awareness, and social interactions) to pupils in at least 40 classrooms. Project staff will maintain activity logs of preventive psychological services listing the nature of each activity and the number of pupils involved.

This objective was attained.

Data summarized from activity logs maintained by project staff revealed that preventive psychological services were provided to 44 classes.

For some of these classes, the preventive services consisted of a series of two or more presentations, rather than a single event.

The most frequently occurring types of preventive services were classroom activities and group discussions.

#### SUMMARY AND CONCLUSION

The Counseling Services Project was partially implemented. The reductions and changes in staff, which occurred at unexpected times created an uneven distribution of services across participating schools. The focus of staff activities,



by necessity, was on short-term intervention and phasing-out of services. The learning therapy program was sharply curtailed, and the in-depth counseling and preventive activities of previous years were not provided.

Within the context of final year activities, the project was able to attain its objectives regarding the provision of psychodiagnostic services, remedial counseling help, and preventive services.

## EDUCATION IN WORLD AFFAIRS

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

Education in World Affairs is a project that promotes knowledge and understanding of current world affairs and of topics related to interdependence. Guest speakers, trips, materials, and conferences are provided for students in Grade 6 and in junior and senior high school.

### RATIONALE

Children should have the opportunity to acquire understandings of the world which go beyond family and local events. Target children have few opportunities to meet people from other nations and learn firsthand of their history, culture, and mores. Although books, booklets, and visual materials are used, the project emphasizes a direct, personal learning approach involving classroom visitations by foreign students, structured visits to cultural or historical centers, and carefully planned conferences which allow the children to meet and discuss issues of interest. Thus the project offers educational experiences not normally available in the regular classroom program of most inner-city schools.

### EXPECTED OUTCOMES

It is expected that meetings with foreign students, visits to sites of interest, and discussions with peers will encourage curiosity, stimulate new interests, inculcate new knowledge, and build respect for other cultures and races. Students should learn about other people: what life is like in other countries, how food and dress relate to climate and customs, and how the lives and problems of people the world over are similar and interrelated.

### PREVIOUS FINDINGS

From 1966 through 1970, project students demonstrated significantly greater knowledge of the countries studied than students who were not in the project. A device used to compare the open-mindedness of project students with that of other students indicated no significant differences.

Monitoring in 1970-1971 through 1971-1972 indicated that project-produced materials were utilized by teachers and that trips were conducted as scheduled.

In 1972-1973, teachers expressed satisfaction with the success of the pilot six-week special-education component involving nine classes of retarded children.

In 1973-1974, test results indicated that junior high school students made statistically significant gains in knowledge of information contained in the specially prepared unit booklets.

In 1974-1975, test results for elementary and junior high students showed an increased mastery in geography, which had been emphasized in newly prepared EWA materials. A locally developed cultural attitudes test produced inconclusive evidence of attitude change; this was attributed in part to problems of measuring such change over a short time period. All materials and special events were provided as scheduled.

In 1975-1976, EWA gave participating students factual knowledge about important global problems and introduced the concept of interdependence. Gains in knowledge for elementary and junior high students could not be determined, because selection of participants, conducted in compliance with the August 1975 court order, resulted in a discrepancy between the reading level of the students and that of the project materials.

#### EVALUATION OF THE CURRENT YEAR

The current evaluation of the Education in World Affairs project was designed primarily to monitor the activities and the functions of the project, as recorded in the EWA Service Log.

#### IMPLEMENTATION

The project operated in general harmony with specifications stated in this year's proposal. EWA provided an effectively coordinated program for 35 upper elementary, 25 junior high, 15 senior high, and eight special education classes in 68 public and 11 nonpublic schools. The project director and two liaison teachers worked together to organize special programs and trips, and to prepare and disseminate books, charts, posters, filmstrips, booklets, a Teacher's Guide that included suggested language-skill activities, and lists of suggested basic skill activities for each unit of study. Teachers who volunteered as project sponsors in their schools received these materials and services.

Elementary students studied four units this year including One World/Interdependence, Food, Clothing/Shelter, and Trade. Junior high school students studied three units including Energy, One World/Interdependence and Trade. For each unit studied a student booklet was specially prepared by EWA including information on the topic and a variety of basic skill activity pages to stimulate student learning. Photographs, illustrations, maps, art reproductions, poetry, games, and puzzles were interspersed throughout the booklet to add clarity and interest to the material. To enhance the classroom presentations of each unit, EWA provided teachers with books to be used in reading groups or

the classroom library, with records, films or filmstrips, maps, posters, games and puzzles, and a Teacher's Guide of Reading Activities. Trips to cultural centers were arranged to supplement three units. EWA staff arranged to have specially prepared programs and lectures at each site. Guest speakers were available to make classroom presentations for two units. Liaison teachers were available to classroom teachers and provided ideas and follow-up activities for each unit.

Special education classes studied two units--One World and Food Around the World. Each unit had specially prepared booklets that provided for their level and needs. Special education teachers also received supplemental books and audio-visual materials for enrichment activities. Trips were specially selected and arranged to supplement the units, and the lecturers geared their presentations to the special education audience. Presentations made by the students were a highlight of this year's culminating program. In attendance were the participating special education students, parents, teachers, and district administrators.

The senior high program focused on world issues of current importance. Due to problems beyond the control of EWA, the senior high school liaison teacher who was selected in the fall was not officially appointed until the end of March. As a result, the project administrator and staff had to assume his duties for most of the year in addition to their own. The newly appointed liaison teacher has since assumed all program responsibilities. Six units were studied by the participating senior high school students including China, The Earth's Resources, Senator Joseph Biden, Model Senate Foreign Relations Committee Hearings, India, and the Arab World.

Senior high students received subscriptions to two news periodicals--a half-year of Newsweek and a half-year of either Time or The New York Times. EWA also provided students with six specially prepared background briefs, one United Nations tour, guest speakers on issues studied, and opportunities to attend various forums and seminars. Models of the United Nations and Senate Foreign Relations Committee Hearings were planned, organized, and conducted by students with the guidance of the EWA staff.

#### ATTAINMENT OF OBJECTIVES

Objective 1: During the 1976-1977 school year, participating elementary, junior high and senior high school teachers will receive at least ten (10) supplemental activities designed to promote the development of basic academic skills (reading, language arts, and/or mathematics) in each unit of study.

This objective was partially attained.



Elementary teachers received five supplemental basic skill activity lists for four units of study (separate ones for One World and Interdependence). Each list included at least ten activities. Elementary teachers responding to a survey in the spring reported that they received the basic skill activity lists and that the lists were written on an appropriate level for their students. Several teachers believed these lists were the most useful of the materials provided by EWA. Project staff attributed this favorable response to the worksheet format of the elementary activity lists and to the fact that participating elementary teachers were provided copies of each worksheet for every student in the class.

Junior high teachers received two activity lists for the three units studied. One of these lists included fewer than the ten activities specified in the objective. Senior high teachers received only three lists of ten basic skill activities for six units of study. Project staff felt that the content of the units on Senator Biden and the model Senate Foreign Relations Committee Hearings did not lend themselves to activity lists. Also, time limitations (because the project director had to assume liaison teacher duties in addition to her own) prevented the preparation of a list for the unit on India.

Objective 2: During the 1976-1977 school year, junior high and senior high school students will increase knowledge related to one randomly selected unit of study as evidenced by their written responses to an essay question administered as a pretest and posttest.

This objective was partially attained.

In an attempt to pilot this new testing procedure the evaluator and the project staff developed separate essay tests for junior high and senior high students. Two classes at each level were selected by the evaluation team for the administration of the pretest and posttest.

The unit on Trade was selected for the junior high school test. The two essay-test questions appeared in the Trade booklet which had been prepared by the project staff and distributed to each participating junior high school student. The senior high school test examined a unit called "The Arab World." The briefing notes prepared by the project staff for this unit were used as the foundation for the two senior high essay questions. In both testing situations, adequate information was presented in the materials EWA provided to answer the test questions. Students also received credit for including appropriate facts from other sources.

Data for each group were analyzed using the sign test (Nonparametric Statistics For the Behavioral Sciences, pp.68-75). It was expected that a significantly greater number of students would include more facts about the unit topic on the posttest than on the pretest. The junior high school group

(N=38) showed no significant increase. However, a significantly ( $p < .0005$ ) greater number of senior high school students (N=42) included more facts about their topic on the posttest.

### SUMMARY AND CONCLUSIONS

Education in World Affairs was fully implemented in 1976-1977 and gave participating students factual knowledge about important global problems and the concept of interdependence. Instruction was organized into manageable six-week units in which written material, charts, trips, and guest speakers provided a multifaceted approach.

This project enabled students to gain new experiences and visit places they might never have seen. Again all classes were given the opportunity to visit the United Nations. Selected high school students also went to Washington, D.C. and participated in all-day forums, seminars, model Senate and United Nations programs. Guest speakers of various nationalities and professional backgrounds visited the project's classrooms and made presentations at special events.

Books and materials furnished to the elementary and junior high classes were prepared and selected to reinforce and enrich reading, language, and mathematics skills. High school students were provided with periodicals, briefings, and lectures. Special education students had programs structured to broaden their awareness of the world's interdependence. Trips to museums and other cultural centers exposed students to various problems and viewpoints related to units studied. Elementary and special education classes provided entertainment at end-of-year programs. Evaluators' observations of EWA programs verified the active attendance and participation by students at each level; participants also appeared well prepared.

Constant support and consultation were given to teachers in classrooms by the EWA staff. Planning sessions and conferences were conducted to keep teachers informed of available materials for teaching about various cultures represented in the Philadelphia area. Teachers enjoyed the opportunity for informal sharing of ideas with other teachers and project personnel.

The two project objectives were partially attained. A new testing procedure was piloted this year with a random selection of junior and senior high students. A significant number of senior high school students in the pilot group showed an increase in the number of facts they included about an EWA unit topic on a posttest; a significant increase was not evidenced in the posttest results of the junior high pilot group.

Participating elementary, junior and senior high school teachers did receive lists of supplemental basic skill activities. Only the elementary teachers

received one list for each unit studied. Junior high teachers received two lists for the three units studied; senior high teachers received three lists of activities for six units of study.

Observations, informal interviews, and a teacher survey revealed that trips were taken, materials were received, and speakers arrived in classrooms and at special events as planned. The evaluation team concluded that the project integrated advanced educational practices with many of the finest available materials to provide a relevant, well-planned educational experience.

## ELEMENTARY MATHEMATICS CLASSROOM AIDES

The Part-time Elementary Mathematics Classroom Aides project is designed to improve the computational skills of Title-I-eligible pupils in Grades 2-6 by providing aides who supplement the work of the Elementary Mathematics Resource Teachers.

### RATIONALE

Pupils who participate in the Elementary Mathematics Resource Teacher (EMRT) project lack the computational skills and conceptual understanding of computational activities. The Part-time Elementary Mathematics Classroom Aides project was created to supplement the work of the EMRTs and classroom teachers of these pupils. The aides are able to provide additional individualized and small-group assistance to pupils and by assuming some of the teacher's non-instructional tasks, increase the amount of time teachers are able to devote to actual instruction, diagnosing learning problems, developing and implementing instructional strategies, and evaluating pupil progress.

### EXPECTED OUTCOMES

The project is designed to provide individualized and small-group assistance to participating Title-I-eligible pupils and non-instructional assistance to EMRTs and classroom teachers of these pupils. Through such assistance, pupils should be able to improve their mathematical skills.

### PREVIOUS FINDINGS

There were no previous findings because this was the first year of the project.

### EVALUATION OF THE CURRENT YEAR

The current year's evaluation of the Part-time Elementary Mathematics Classroom Aides project focused on program implementation. Project records, interviews, and observations of the aides were used to assess level of program implementation. Staff-development sessions were also monitored by evaluators.

### IMPLEMENTATION

During 1976-1977, the first year of operation, the project was fully implemented according to plan in 38 Title I elementary schools. At three schools, new aides replaced those who had left during the school year.



The Division of Mathematics Education provided 15 hours of intensive staff development in October, and 12 additional hours during the school day. At these sessions, the aides learned about teaching techniques and activities for use in the classroom.

Using the Observational Checklist, the evaluator interviewed and observed 15 of the 38 aides working under the direction of an Elementary Mathematics Resource Teacher (EMRT) or a classroom teacher. All aides reported spending at least 75% of their 15-hour week working with individual or small groups of pupils. They were observed assisting pupils with such topics as addition facts, number recognition, subtraction by borrowing, and place value. They were also observed marking papers, performing other clerical work, performing housekeeping tasks, and preparing and maintaining instructional materials.

#### ATTAINMENT OF OBJECTIVES

Objective 1: The Part-time Elementary Mathematics Classroom Aides will assist the Elementary Mathematics Resource Teachers by working at least 75% of the time with individual or small groups of pupils in the Mathematics Center or the classroom during a mathematics lesson, and not more than 25% of the time performing clerical work, performing housekeeping tasks, and/or preparing and maintaining instructional materials. These activities will be verified by the evaluator's examination of the aides' Weekly Schedules and observations made with the Observational Checklist.

The objective was fully attained. The activities of the aides were verified through observations and interviews, using the Observational Checklist and examination of the Weekly Summary of Activities Log.

Using the Observational Checklist, the evaluator interviewed and observed 15 aides. All were observed working with individual or small groups of pupils. Some aides worked with pupils with the Elementary Mathematics Resource Teacher (EMRT), some worked with their own groups of pupils under the direction of the EMRT, and others worked with pupils with the classroom teacher. The aides were also observed performing clerical work, performing housekeeping tasks, preparing and maintaining instructional materials, and planning activities with teachers.

Aides completed a Weekly Summary of Activities Log for the weeks of November 1-5, 1976, January 24-26, 1977, and March 28-April 1, 1977. Because of the severe weather, school closings caused the log for January to be based on a three-day week. Complete logs were obtained from 30 aides in November, 29 aides in January, and 29 aides in March.

Overall, the aides spent an average of 78% of their time working with pupils in Grades 1-8. Although more time was spent working with small groups of pupils than with individual pupils, changes in the aides' activities were indicated between November and March. As shown in Table 1, aides in November reported spending 72% of their time working with pupils. Because this finding did not meet the project's goal, action was taken by the project coordinator to increase the time aides spent working with pupils. In January and March, the aides reported spending 82% and 81% of their time, respectively, working with pupils.

Aides tended to work under the direction of the EMRT rather than under the direction of the classroom teacher. However, between November and March, there was a decrease in the percentage of time (67% to 58%) spent under the direction of the EMRT and likewise, an increase in the percentage of time (26% to 37%) spent under the direction of a classroom teacher.

Overall, an average of 16% of the aides' time was used for providing non-instructional assistance to the EMRTs or classroom teachers. In providing this assistance, 5% of the time was spent performing clerical work such as record keeping, marking of papers, and recording of attendance; 4% of the time for planning pupil activities with teachers; 1% of the time for housekeeping tasks; and 6% of the time for preparing and maintaining instructional materials.

In addition to working with pupils and providing assistance to teachers, the aides spent the remaining 6% of their time on other activities.

In general, the Elementary Mathematics Classroom Aides were successful in providing assistance to Title-I-eligible pupils under the direction of an EMRT or a classroom teacher. They also provided direct assistance to the EMRT or teacher by performing clerical work, performing housekeeping tasks, and preparing and maintaining instructional materials.

#### SUMMARY AND CONCLUSIONS

The Elementary Mathematics Classroom Aides project was established to provide aides to work with Title-I-eligible pupils and to assume some of the non-instructional tasks of the Elementary Mathematics Resource Teachers and classroom teachers. During 1976-1977, the first year of operation, the project was fully implemented according to plan in 38 Title I elementary schools.

Observations, interviews, and examination of the Weekly Summary of Activities Log indicated that the aides had used their time as specified in the project's objective. The aides spent an average of 78% of their time working with individual or small groups of pupils and an average of 16% of their time performing clerical work, performing housekeeping tasks, preparing and maintaining instructional materials, and planning activities with teachers. The remaining 6% of the time was spent on other activities.

TABLE 1  
SUMMARY OF ACTIVITIES PERFORMED BY  
ELEMENTARY MATHEMATICS CLASSROOM AIDES

| Activity                                                                                                  | AVERAGE MINUTES WORKED DURING SAMPLE WEEKS |                            |                           |
|-----------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------|---------------------------|
|                                                                                                           | November<br>(N = 30)                       | January<br>(N = 29)        | March<br>(N = 29)         |
| I. Under Supervision<br>of EMRT                                                                           |                                            |                            |                           |
| Work with individual pupils                                                                               | 91.3 (11%)                                 | 56.5 (11%)                 | 115.9 (13%)               |
| Work with small groups of pupils                                                                          | 308.2 (36%)                                | 190.9 (37%)                | 273.9 (32%)               |
| Perform clerical work and house-keeping tasks, prepare/maintain instructional materials, plan activities. | 172.5 (20%)                                | 68.1 (13%)                 | 111.7 (13%)               |
| II. Under Supervision<br>of Classroom Teacher                                                             |                                            |                            |                           |
| Work with individual pupils                                                                               | 34.2 ( 4%)                                 | 55.5 (11%)                 | 87.4 (10%)                |
| Work with small groups of pupils                                                                          | 174.2 (21%)                                | 118.1 (23%)                | 223.8 (26%)               |
| Perform clerical work and house-keeping tasks, prepare/maintain instructional materials, plan activities  | 8.8 ( 1%)                                  | 1.0 (<1%)                  | 8.8 ( 1%)                 |
| III. Other                                                                                                | 57.0 ( 7%)                                 | 24.0 ( 5%)                 | 45.9 ( 5%)                |
| TOTAL                                                                                                     | 846.2 (100%) <sup>*</sup>                  | 514.1 (100%) <sup>**</sup> | 867.4 (100%) <sup>*</sup> |

\*Data was compiled for a 15-hour, five-day week.

\*\*Data was compiled for a nine-hour, three-day week.

## ENGLISH AS A SECOND LANGUAGE--READINESS

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

The ESL Readiness project is designed to provide Spanish-speaking children with kindergarten experiences structured to develop English language competency and readiness skills.

### RATIONALE

The primary assumption of the project is that many first-grade Spanish-speaking children in target schools are low achievers because of poor English facility, a lack of the necessary readiness skills, and the attendant effects of poverty. Low achievement frequently continues throughout the school career of the Spanish-speaking child. The project seeks to avoid this long-term handicap by serving Spanish-speaking children while they are in kindergarten.

### EXPECTED OUTCOMES

As a result of project participation, the pupils are expected to develop essential readiness and English-language skills which will enable them to succeed in first grade and, consequently, in their entire school careers.

### PREVIOUS FINDINGS

Previous evaluations consistently indicated that the project was partially successful in meeting its goals of developing English language competency and readiness skills. Since 1974, 50 to 65% of the pupils attained mastery scores on tests of readiness for first grade. Pupils also showed statistically significant gains ( $p < .05$ ) from pretest to posttest on the Elementary School Speaking Test in English and Spanish.

### EVALUATION OF THE CURRENT YEAR

This year's evaluation of the ESL Readiness project focused on the degree to which the pupils developed their readiness skills (measured by the Stanford Early School Achievement Test) and their mathematics skills (measured by the Keymath Diagnostic Arithmetic Tests) and the degree to which they improved their English language skills (measured by the James Language Dominance Test).



Objective 2: Project pupils will develop their reading readiness skills to the extent that 50% of them attain a raw score of 10 or more on Part 3 (Letters and Sounds) and 50% of them will attain a raw score of 17 or more on Part 4 (Aural Comprehension) of the Stanford Early School Achievement Test (SESAT) administered in May.

The objective was attained.

The criterion scores applied to Parts 3 and 4 of the SESAT were the respective mean scores obtained in 1975-1976 by pupils in District 5, in which 4 of the centers are located. These subtests were administered to 127 pupils in May.

The distribution of scores is presented in Table 2. On the Letters and Sounds subtest, 55.1% of the pupils attained or exceeded the criterion score of 10. On the Aural Comprehension subtest, 61.4% of them attained or exceeded the criterion score of 10. Thus, on both subtests of the SESAT, more than the anticipated 50% of the pupils attained or exceeded the criterion.

Objective 3: Project pupils will develop their mathematics readiness skills to the extent that, by May, 50% of them will have a raw score of 30 (the 0.8 GE level) as measured by the KeyMath Diagnostic Arithmetic Test.

The objective was attained.

The KeyMath Diagnostic Arithmetic Test was administered in May to 131 pupils.

The range of scores was from 0.3 GE to 2.6 GE. The median score was 1.3, and 89.3% of the pupils attained scores equal to or greater than the criterion score (0.8 GE).

#### SUMMARY AND CONCLUSIONS

The ESL-R project was fully implemented at all 5 sites. Spanish-speaking kindergarten children participated in instructional programs designed to foster development of their English-language and school-readiness skills.

All project objectives were attained. More than the expected percentages of pupils attained criterion scores on the Letters and Sounds and Aural Comprehension subtests of SESAT.

ESL-R's greatest success was in the area of mathematics-readiness. Eighty-nine percent of the pupils (more than the expected 50%) achieved or exceeded the mastery score of 0.8 GE, and their median score of 1.3 was above the criterion. The project also experienced unusual success in having Spanish-dominant pupils (Category 1 on the James Language Dominance Test) increase their facility with English. Eighty-four percent of these pupils (more than the expected 75%) advanced to categories which indicated some degree of bilingualism.

## IMPLEMENTATION

In 1976-1977, the project's intended mode of operation was fully implemented. The evaluators' observations and interviews with ESL-R teachers indicated that the project's operation was similar to that of previous years.

ESL-R centers were located in 5 schools which had a high percentage of Spanish-speaking children. Each center was staffed by a teacher and one or two bilingual aides.

Children attended the centers for approximately 3 hours each day. The instructional programs stressed development of pupils' English-language skills. Pupils also received training in perceptual, motor, mathematics-readiness, and reading-readiness skills. Teachers used both English and Spanish as instructional languages, with the amount of English that was used increasing as the year progressed. By March, they were using English almost exclusively.

The ESL-R classes generally were divided into small groups for instruction in readiness skills. The most frequently observed pattern was 3 groups of pupils rotating among 3 activities. For music and gross-motor skill activities, large group instruction was utilized.

## ATTAINMENT OF OBJECTIVES

Objective 1: Project pupils will improve their English language skills to the extent that: (a) there will be a significant gain ( $p < .05$ ) from September pretest to May posttest on the James Language Dominance Test (English subtest); and (b) at least seventy-five percent (75%) of the pupils classified in Category 1 (Spanish dominant) on the pretest of the James Language Dominance Test will be classified in at least Category 2 (Bilingual with Spanish as a home language) on the May administration.

The objective was attained.

The James Language Dominance Test (English subtest) was administered to 109 pupils in September and again in May. Pretest scores ranged from 21.9 to 27.4, with a mean of 24.5. Posttest scores ranged from 32.2 to 34.9, with a mean of 33.8. The 18.8 point pretest to posttest gain was found to be statistically significant ( $t=13.90$ ,  $p < .005$ ).

This test also provided for classification of pupils into language dominance categories ranging from 1 (Spanish Dominant) to 5 (English Dominant). The distribution of pupils, according to language categories, is presented in Table 1. Of the 80 pupils classified in Category 1 on the pretest, 67 (83.8%) advanced to Categories 3 and 4 on the posttest. This exceeded the expectation that 75% of these pupils would advance at least to Category 2.

TABLE 1

NUMBERS OF ESL-READINESS PUPILS CLASSIFIED IN  
EACH OF 5 LANGUAGE DOMINANCE CATEGORIES ON THE  
SEPTEMBER AND MAY ADMINISTRATIONS OF THE  
JAMES LANGUAGE DOMINANCE TEST, 1976-1977

| Categories           | Pretest   | Posttest  |
|----------------------|-----------|-----------|
| 5 (English Dominant) | 2 (2%)    | 4 (4%)    |
| 4                    | 6 (6%)    | 16 (15%)  |
| 3                    | 16 (15%)  | 75 (69%)  |
| 2                    | 5 (4%)    | 1 (.1%)   |
| 1 (Spanish Dominant) |           |           |
| Total                | 109(100%) | 109(100%) |

TABLE 2

NUMBERS OF ESL READINESS PUPILS SCORING IN SPECIFIED RANGES  
ON SELECTED SUBTEST OF THE SESAT, SPRING 1977

| Raw Score<br>Range | Sounds and<br>Letters | Aural<br>Comprehension |
|--------------------|-----------------------|------------------------|
| 26-29              | 25 (20%)              | 5 (4%)                 |
| 22-25              | 26 (20.5%)            | 20 (15%)               |
| 18-21              | 25* (20%)             | 29 (23%)               |
| 14-17              | 35 (28%)              | 35* (28%)              |
| 10-13              | 12 (9%)               | 29 (23%)               |
| 6-9                | 4 (3%)                | 9 (7%)                 |
| <6                 | 0                     | 0                      |
| Total              | 127 (100%)            | 127 (100%)             |

\*interval containing the mean score



## ENGLISH TO SPEAKERS OF OTHER LANGUAGES

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

The English to Speakers of Other Languages (ESOL) project helps pupils in Grades K-12 whose first language is not English to master English language skills. Using a staff of bilingual teachers, it emphasizes development of English speaking and listening skills.

### RATIONALE

The acquisition of English as a second language has been described by Robert Lado as "acquiring the ability to use its structures within a general vocabulary under essentially the conditions of normal communication among native speakers at conversational speed."

Most of the pupils in the ESOL project lack basic skills in spoken and written English. Language instruction needs to be provided in a systematic manner because chance contacts with spoken English are usually insufficient for these children to gain needed skills. The project provides a springboard into reading and writing skills by emphasizing essential structures, idioms, and vocabulary of oral English. Bilingual teachers facilitate communication.

### EXPECTED OUTCOMES

Pupils served by this project are expected to show marked improvement in speech production and comprehension, and to demonstrate better communicative skills in English when compared with non-ESOL pupils with similar backgrounds. It is expected that pupils will learn the patterns of everyday speech and will develop appropriate skills in reading. These pupils are expected to be able to use and understand English in normal conversational settings when their participation in the project is completed.

### PREVIOUS FINDINGS

Because special instruction is provided to all eligible pupils identified as needing service, control-group evaluation designs have not been used. In recent years, more rigorous statistical control of extraneous variables increased the probability that improvements in skills were directly related to project impact.

Evaluations since 1966-1967 have revealed improvement in pupils' English-language competencies during the school year. Parents, principals, and both project and homeroom teachers reported that ESOL was successfully meeting its objectives. Surveys and observations by evaluators were corroborated by results of tests. The Linguistic Capacity Index, the Boehm Test of Basic Concepts, and the Stanford Diagnostic Reading Test (Level I) indicated that longer contact with the project was associated with learning more English.

In addition to contact with the project, the following factors were found to be related to the acquisition of English-language skills: (a) pupil's length of time in an English-speaking environment, (b) pupil's adjustment to school, (c) school attended, (d) grade, (e) class size, (f) hours of instruction, and (g) instructional setting. For pupils in all-day, self-contained classrooms, more than 90% of the year's increase in test scores was found to occur in the first half of the year. This was in striking contrast to pupils attending project classes part-time, for whom the increase tended to be distributed evenly throughout the year.

In 1973-1974, grade, years on mainland, length of instruction, text used, and class size were found to be significantly related to test scores. When age, grade, or length of time on the mainland was controlled, pupils in the project for more than a year scored better than those with less than a year's contact with the project.

For the past two years evaluation have utilized simultaneous control of additional variables: grade of entry into ESOL, time on the mainland before ESOL mother tongue, and sex. Marked improvement in aural comprehension was found to result from time in the project.

#### EVALUATION OF THE CURRENT YEAR

In the current year, the ESOL evaluation process included (a) updating information about pupils admitted to the project from Fall 1974 through Spring 1977, (b) developing procedures to identify pupils who no longer need service, and (c) measuring the impact of the project on pupils' production and comprehension of spoken English.

#### IMPLEMENTATION

In 1976-1977, the project's intended mode of operation was implemented.

Early in the year, project staff completed revision of the Philadelphia ESOL Screening Test. The test was altered to reflect differences in maturation so that recommendations for ESOL placement were made by considering a pupil's grade as well as his score. Additional emphasis was placed on identifying

pupils who need ESOL-type service (including a variety of bilingual programs) rather than distinguishing between beginning, intermediate or advanced scores (in which grade was considered), recommendations (incorporating observations of program staff) and actual assignment to the program. These distinctions are useful in reconstructing the decision-making process.

The emphasis on identifying pupils of limited English-speaking abilities was reflected in a number of other steps taken by project management. At the start of the school year, a survey was made of all Title I schools with no ESOL candidates. Several hundred additional screening tests were administered throughout the district to identify individuals who could get service at neighboring program schools and to locate pockets of pupils who may have been overlooked in the past because of the high mobility within Philadelphia and from other areas. Program candidates at these additional schools were screened by teams of supervisors.

At schools where an ESOL program has been implemented, additional efforts were made to screen pupils who might have been overlooked because their deficiencies in English-language skills were less pronounced. To enable teachers to seek out and screen such pupils, project staff and evaluators provided information about current ESOL needs of pupils who had been screened in the previous two years. Two documents were provided at the start of the school year. School Lists showed who were expected to attend each Title I school. The City-wide List facilitated the identification of pupils who should be in ESOL and who moved from school to school. If an ESOL teacher found a record of a pupil on one of the documents, a screening test was not required. The record guided placement of a pupil in the program. As a result of screening new pupils and using the computer-generated lists of the ESOL Longitudinal File, at least 3,047 pupils attending Title I schools were enrolled in ESOL by mid-year. The process of checking records, screening, and placement continued throughout the year.

At the end of the year teachers were asked to verify information about the types of services pupils received this year and to indicate the levels of service pupils are expected to need in the fall. Information about pupils was collected from the school the pupil most recently attended plus any other schools where an ESOL teacher may have observed the pupil.

As the ESOL longitudinal file has moved into its third cycle, the complexity and scope of the data bank has increased. The school District of Philadelphia has undertaken the management of this system by committing its computer facilities and staff, at a probable savings of \$12,000 in out-of-pocket costs. The Division of Data Processing, working with evaluators and project staff has been able to systematize the 20,000 or so records collected during the past three years.

Sixty-one monitoring visits, at 21 different schools and at the Multilingual Resource Center, were conducted through April 1977. About half the visits focused on screening. The remaining visits were divided equally between observation of posttesting and observation of on-going classroom instruction. These visits suggested that the three activities, screening, instruction and testing, were carried out in accordance with the proposal. At many sites bilingual instruction supplemented English instruction. (The supplementation was partially supported by a bilingual-education grant at two sites.) At two sites, classroom facilities were judged to be a problem and one teacher was observed mixing English and the mother tongue of the pupils inappropriately.

In conclusion, the ESOL program was conducted in a manner consistent with the project proposal and aims. During 1976-1977 extraordinary efforts by project management and supervisors were devoted to assuring that all pupils who needed service were identified.

#### ATTAINMENT OF OBJECTIVES

Objective 1: The longer a pupil studies ESOL, the higher he/she will score on the Test of Aural Comprehension of English (TAC) when the pupil's background is taken into account. A regression equation computed on tests administered in March, 1977 will show a statistically significant relation ( $p < .10$ ) between the length of time a pupil studied ESOL and TAC scores when sex, age, grade, place of birth, mother tongue and length of residence on the mainland are controlled.

This objective was attained.

The TAC was administered in March and April in Grades 1-12 at all participating schools. A total of 1,503 pupils were tested with either form of the test (A or B). Analysis of the 867 pupils with complete information is based on the general linear model and indicates a positive relation between test scores and length of time in an ESOL/bilingual program. This relationship was statistically more significant than the specified .10 level. The results suggest that aural comprehension tends to increase with continued participation in ESOL to an extent beyond that which could be expected from the pupils' backgrounds, and their living in an English-speaking environment without studying ESOL. The results of the regression analysis of Form A are shown in Table 1, of Form B in Table 2.

The variable sex was held statistically constant to control for different rates of growth in language acquisition between boys and girls and for possible biases that might result from some schools serving only boys or girls. Table 1 shows that for the model posited, the relation between sex (coded 0 for males and 1 for females) and score on Form A is not significant. Table 2 confirms



this finding in the analysis of Form B. This may be interpreted as indicating that for the skills covered by the TAC, there is no difference in score attributable to sex. It may also be interpreted as showing the TAC is equally fair to both sexes.

Since TAC scores probably reflect skills acquired in school, grade was held constant. Tables 1 and 2 indicate that for both forms of the TAC a pupil is likely to know 2.8 items more than an equivalent pupil who is one grade lower. As expected, this impact of grade is highly significant.

The age of the pupil was not significantly related to score when other variables were taken into account. The high collinearity between age and grade (their correlation is about .97) makes interpretation difficult.

The ethnic background of the pupil was also considered in the analysis. Pupils whose mother tongue is Spanish were coded as 0 and all other language groups were coded as 1. Where information about mother tongue was missing, place of birth (Puerto Rico or other) was used. Controlling for this variable, it was thought, would reduce the influence of social and ethnic characteristics on program evaluation. The two test forms yielded inconsistent results, both for the direction of the relationship and its significance. Hispanic pupils did significantly better on Form A but on Form B there was no significant difference between the two ethnic groups. This suggests that further inquiry is necessary.

The acquisition of language skills would seem to be related to the amount of exposure to English outside of the program. One measure of this construct is the time in the continental United States. Table 1 indicates that an additional year in an English-speaking area increases scores on TAC-A by 1.14 items and Table 2 shows the increase to be a bit less than one item.

The key question is whether participation in an ESOL program contributes to aural comprehension over and beyond the contributions of grade, age, sex, ethnic background and number of years on the mainland. Tables 1 and 2 show a significant positive relation between months in ESOL (based on 10-month years) and test scores, independent of the other variables.

The results in Tables 1 and 2 predict that an additional month on the mainland when the pupil is not attending school will increase his score by .036 on TAC-A and .032 on TAC-B. If the pupil spends this month in school without an ESOL program the improvement will rise to .301 and .292. If the pupil is participating in an ESOL program the improvement will rise to .462 and .415. Thus we conclude that there is an increase of more than four points for the average pupil over the 10-month academic year. Since the average score is 18.9 for pupils taking TAC-A in the spring and 21.3 for TAC-B, these gains are considered substantial.

Objective 2: Pupils enrolled in ESOL will show increased facility in speaking English as demonstrated by a statistically significant ( $p < .10$ ) correlation between the number of months a pupil has studied ESOL and their scores on the speaking section of the ESOL Screening Test when the pupils' mastery of English at the time of enrollment is controlled.

This objective was considered partially attained. Mean scores of 96 subjects on the speaking sections of the ESOL Screening Test increased from 8.61 on the initial screening to 9.48 on the later testing. For the second speaking section the increase was from 10.00 to 15.00. Analysis of partial variance was used to determine whether there was a significant positive relation between time in program for newly admitted pupils and later test score (having adjusted for all curvilinear effects of initial scores). For both parts of the test, the relationship was not significant.

The lack of conclusive findings may be attributable to the dates that post-tests were administered. They were concentrated in a two-month period rather than spread out over a longer time span as required by the evaluation design. Thus external factors other than program participation cannot be ruled out.

Objective 3: Program staff will complete the formalization (begun in 1975-1976) of criteria to be used in determining which pupils should move to the regular school program from the ESOL program.

This objective was not attained. The project administrator and supervisory personnel met to discuss criteria for returning ESOL pupils to regular classes. A meeting was also held with the Executive Director of English and Language Arts. Because of the complexity of designing criteria, formalization of exit criteria across schools and components could not be completed. Therefore, teacher recommendations for 1977-1978 were gathered as part of the Spring ESOL Longitudinal File update.

#### SUMMARY AND CONCLUSIONS

Extraordinary efforts have been made by project management and supervisors in the identification of pupils with limited English-speaking abilities. A survey was made of Title I schools which were not already served by bilingual or ESOL programs. Pupils were screened by program staff to determine whether population shifts necessitated additional program sites. Augmented screening was conducted at schools with Title I ESOL.

Conversation with program personnel and over sixty visits to site locations indicate that the ESOL program was conducted in a manner consistent with the project's intended mode of operation.

Analysis of 1,500 tests suggest that there was an increase in aural comprehension attributable to participation in the program. This increase was statistically significant even after controlling for the effects of age, grade, sex, residence in an English-speaking environment and ethnic background. Results indicate that participating in the ESOL program for 10 months leads to an increase in knowledge of more than four items. Since the average score was about 20 this increase is substantial.

Efforts to determine the impact of the program on oral production were less fruitful. Although pupils tested later in the year scored much higher on the speaking section of the test than they did when originally screened, it is possible that this finding was due to factors other than the program.

Establishment of formal criteria for returning ESOL pupils to the regular program has been elusive. This issue remains to be resolved.

TABLE 1  
REGRESSION OF TAC-A SCORE ON VARIOUS ESOL PUPIL CHARACTERISTICS

| Independent Variable           | b Weight | Significance |
|--------------------------------|----------|--------------|
| Sex                            | -.235    | .776         |
| Grade                          | 2.646    | .0001        |
| Age                            | -.706    | .1217        |
| Ethnic Background              | -1.65    | .0986        |
| Years in English-speaking Area | 1.143    | .0001        |
| Months in Program              | .161     | .0001        |

Based on 460 cases for whom all relevant information was available.

Mean score = 18.966, S.D.=8.732, multiple  $R^2$ =.454

TABLE 2  
REGRESSION OF TAC-B SCORE ON VARIOUS ESOL PUPIL CHARACTERISTICS

| Independent Variable           | b Weight | Significance |
|--------------------------------|----------|--------------|
| Sex                            | .682     | .5137        |
| Grade                          | 2.594    | .0003        |
| Age                            | -.508    | .4283        |
| Ethnic Background              | .044     | .9734        |
| Years in English-speaking Area | .895     | .0001        |
| Months in Program              | .123     | .0224        |

Based on 407 cases for whom all relevant information was available.

Mean score = 21.333, S.D. =10.306, multiple  $R^2$ =.368



## FOLLOW THROUGH (ESEA TITLE I COMPONENT)

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

Follow Through is a nationwide, comprehensive program for children in Grades K-3. It emphasizes planned variation in instructional approach, intensive parent and community involvement in school functioning, and special supportive services.

Additional Title I funding in Spring 1975 made possible a locally developed expansion of Follow Through to new schools and an extension of the regular program to fourth grade in schools already in the project. The extension to fourth grade had to be discontinued after 1975-1976, due to fiscal conditions. The expansion program maintains all the essential characteristics of the nationwide parent program.

### RATIONALE

The local project administration formulated a needs statement as the basis for introducing Follow Through in Philadelphia:

Children having lived in or existed under certain conditions of the city have the need for a comprehensive program in the early years. An attempt must be made to provide them with the special support services deemed important to the learning process, i.e., medical and dental care, nutrition, social and psychological services, teacher training and active parent involvement. Children need to experience a good feeling about school and its environment derived from achieving success academically and socially. There is also a need to offer alternative instructional models to improve opportunities for these children. New approaches to early childhood education must be examined in the pragmatic settings of the local schools.

### EXPECTED OUTCOMES

The broad goal of Follow Through is to improve the scholastic achievement of the participating children by meeting their academic, health, and psychosocial needs through provision of a comprehensive service program for both the children and their parents. The project aims to attain this goal by providing the following services: (a) an individualized instructional program adjusted to the ability level of the child, in order to increase his productivity, self-expression, and self-confidence; (b) a continuous in-service program for all staff, administrators, and parents; and (c) health services, diagnosis, and treatment as necessary to promote the child's educational, emotional, and physical development.

## PREVIOUS FINDINGS

In the regular program, implementation efforts over the years in the instructional component can be summarized as follows:

The Bank Street and Behavior Analysis Models have consistently exhibited expected program characteristics to a very high degree. The Bilingual Model has shown considerable improvement recently, particularly in two of the three schools; a number of implementation problems persist, however, at the third school. There has been good implementation in the EDC Model over the last few years; as implementation has improved, however, theoretical disagreements have surfaced regarding the appropriate form of emphasis on the basic skills. In the Florida Parent Education Model, better arrangements have been made recently for home-delivery of instructional tasks, producing improved implementation since this is a crucial element in this model. The two models which use the locally developed process approach (Philadelphia Process as well as Parent Implemented) have been steadily improving in implementation due to better staff organization and articulation of responsibilities among instructional specialists, expeditors, principals, and classroom staff.

The expansion program, which was already adversely affected by a "freezing" of Title I funds in its first year of operation, 1974-1975, experienced another long "freeze" period in 1975-1976. The former "freeze" period hampered introduction of the program at the kindergarten level; the latter, at the first grade level. By the end of 1975-1976, in spite of the "freeze" conditions, satisfactory implementation was accomplished throughout the expansion program in kindergarten, but this was not the case in first grade, where the "freeze" impaired hiring of adequate staff and purchasing of required instructional materials. Among the instructional approaches in the expansion program (where the term "option" is used, rather than "model"), a local adaptation of the Bank Street curriculum and method (Option 4) was the best implemented through 1975-1976.

In achievement, as measured by citywide or national evaluation batteries over the five years, 1971-1972 through 1975-1976, the total regular program (TFT) showed continuous improvement in both Math and Reading across Grades K-3. By 1975-1976 in Math, TFT attained mean scores above the 50th national percentile across Grades K-2 and achieved the 45th percentile for the first time in Grade 3; in Reading, by 1975-1976, mean scores for TFT in Grades K-2 were also at least at the 50th percentile, and the 39th percentile was reached for the first time in Grade 3.

The Behavior Analysis Model (BA) produced the greatest positive effect on achievement during the five years. BA easily ranked first among the models in both Math and Reading (K-3). By 1975-1976 in Math, mean scores in BA were never below the 60th national percentile across Grades K-3; in Reading BA

attained at least the 60th percentile across Grades K-2 and maintained the 49th percentile in Grade 3 which was reached for the first time in 1974-1975. Mean scores in BA, moreover, across the program grades over the five years, were significantly higher than those attained by its appropriate Non-Follow Through (comparison school) and total district groupings in at least 80% of the Math and at least 70% of the Reading comparisons.

The closest model to BA in K-3 performance across the five years was the Bank Street (BS) which ranked second among the models in Math and third in Reading. By 1975-1976, in both Math and Reading, its K-2 percentiles were never below the 50th; in Grade 3 BS had attained the 37th and 39th percentiles in Math and Reading respectively. The Parent Implemented Model could not be ranked over the five years because it was not tested in 1972-1973. The Philadelphia Process Model ranked second in Reading across the five years, principally because of improved performance in 1975-1976; it ranked fifth, however, in Math. EDC ranked third in Math and fourth in Reading, having improved substantially since 1974-1975. The Florida Parent Model ranked fourth in Math and fifth in Reading. The Bilingual Model ranked last in both subject matter areas.

Combined prekindergarten experience and longer exposure to Follow Through have consistently produced higher achievement levels than when prekindergarten experience was lacking. This finding is not only in evidence during the K-3, program years, but also among program "graduates" in the upper elementary grades in contrast to findings usually reported in research journals.

Since the earliest years of the project, the parent involvement component has been well implemented and increasingly successful at almost every project site. Overall, there are highly organized and well-functioning Parent Advisory Committees (PACs), and Philadelphia's unique model-management system is operational, throughout the project. Some project schools, however, are apparently not making the same effort in this area in recent years as was made previously.

The provision of special supplementary medical, dental, psychological, and social services continued to improve over the years to a high point of implementation in 1973-1974. Since then, implementation of this component has noticeably declined, largely because of decreases in funding available for this area.

#### EVALUATION OF THE CURRENT YEAR

The evaluation design continued to be based on a comprehensive documentation approach, with data collection and analysis efforts focusing on (1) achievement, both cross-sectional and longitudinal, the latter via a computerized individual pupil file, (2) classroom process, using the Classroom Observation

Routine (COR) introduced throughout all regular and expansion program sites in 1975-1976, (3) pupil and teacher mobility, (4) pupil daily attendance, (5) parent involvement, and (6) provision of special supportive services.

#### IMPLEMENTATION

During 1976-1977, the project's intended mode of operation overall was partially implemented.

##### Original Program

The effort to improve implementation in the original program which was noted in the 1975-1976 report was again in evidence in 1976-1977. This program in the original 18 schools served a population of approximately 5500 pupils in Grades K-3 in 1976-1977.

To describe implementation in the original program, separate sections below will focus on the three main components: (1) mode of instruction (model), (2) parent involvement, and (3) supportive services. Implementation data were obtained from District Liaison Assistants' monthly reports, site-visit reports by model sponsors, and classroom observation data collected using the Follow Through classroom Observation Routine (COR). The COR is a locally developed instrument yielding information on staffing and pupil grouping patterns, instructional media, and types of cognitive and non-cognitive instructional strategies. The instrument was developed and pilot-tested over the course of two and a half years prior to its use throughout the program in 1975-1976. In Spring 1977, full-time staff and five hired observers conducted two rounds of observations in a one-third sample of classes stratified by model and grade. All observers except one, a newly hired bilingual person, had had previous experience with the instrument; training sessions were held prior to the actual observations, which were not conducted until 70-80% inter-observer agreement had been consistently attained.

##### Mode of Instruction

The Bank Street Model as a whole continued to be well implemented. Sponsor input and local staff efforts have been consistent and well-directed. Staff development emphasis in 1976-1977 was on diagnostic testing as a means of effective individualization of instruction. The sponsor has introduced its own newly developed language assessment tool, the Behavior Ratings and Analysis of Communication in Education (BRACE); teachers are responding well to the instrument. A comprehensive review of the social studies area was also undertaken and guidelines provided for more frequent inclusion of the area in day to day activities. The observation data would indicate that there is a need for the increased emphasis on individualized instruction noted above; while small-group instruction was observed on a better than average basis, whole class instruction was observed equally as often. In the observations it was also



found that three teacher behaviors, "teacher clarifies/expands student response," "teacher encourages expression of feelings or needs," and "supportive correction," expected to be associated with this model with high frequency, were occurring only on an average basis at best in the case of the former two behaviors, while the latter was not observed at all.

The Behavior Analysis Model was also well implemented. The sponsor conducts monthly visits without fail and provides immediate feedback. Maintaining the philosophy of the program was a regular theme of staff development sessions this year; it was also pointed out that "contract" procedures may be more meaningful in certain instances than the "token" system. Classroom teachers, rather than the sponsor, were assigned the responsibility of plotting student target levels this year for the first time; the sponsor will continue to provide direct monitoring of target progress, however. Based on the observation data, small-group instruction occurred most often and most consistently in this model; aides and parent scholars were observed working with children most often in this model also; furthermore, incidences of specific praise and reward-giving, especially the latter, and both for cognitive and behavioral accomplishments, were very high, as would be expected. What is not expected in this model is the high incidence of cognitive disapproval which was observed.

In the Bilingual Model, there continues to be improvement in implementation; this is particularly the case in one of the three schools, which has suffered from unsatisfactory implementation for a number of years, but showed marked improvement in 1976-1977, even though the year was characterized by assignment of a new principal and many new staff. Staff development in the model continues to focus primarily on oral language development. A support teacher is now assisting non-Spanish speaking teachers (who are in the majority, in contrast to the aides, the majority of whom are Spanish-speaking); the sponsor continues to be concerned over the activities of the monolingual teacher during the Spanish hour of instruction. A "contact" system was recently introduced under local program auspices in two of the schools. Some of the key observation findings were as follows: there is more whole class than small-group instruction in this model, but aides were observed regularly working with students, in contrast to last year; the use of ethnic materials was not observed; and there were very high occurrences of behavioral disapproval, but very high incidences, on the other hand of supportive correction and behavioral approval.

Implementation in the EDC Model continues to be good. One of the schools, with less staff turnover and more indications of commitment to the model's philosophy, functions more effectively than the two others, however. The sponsor has continued to provide the model with the consistent guidance and support that was apparent last year. Newly introduced by the sponsor this year was a curriculum on environmental studies revolving around language-use, book-making and creative-writing. The sponsor would like to see its model given more specific attention by the local evaluation unit. The observation data

indicate that whole-class and small-group instruction occur with about equal frequency; the highest occurrence of the behavior "teacher encourages expression of feelings or needs" was found here, as might be expected, but there was also found a very high incidence of specific praise for good classroom behavior.

Improved implementation for the Florida Parent Model was noted last year. In 1976-1977 there was some initial regression from last year's level of functioning and it took most of the year to return to that level. A major problem--not uncommon to the model--was staff turnover; there was also slippage in the quality of the service performed by parent educators when delivering tasks to the home and a reduced rate of home visits. The sponsor introduced more direct monitoring of parent educator activities, however, and a staff developer was appointed during the year so that each school now has full-time service in this area with consequent improvement in implementation again by the end of the school year. According to the observation data, there is about twice as much whole-class as small-group instruction; the parent educator (both aides and parent scholars) were observed working with children in the classroom about half the time, which corresponds to model expectations that they spend half their time in class and half in the home-delivery of classroom tasks.

Both models which use the Philadelphia Process approach (the Parent Implemented and the Philadelphia Process) have continued the strong push toward better implementation which was evidenced last year. Budget restraints compounded with high costs have affected the purchase of supplies and equipment required for ideal model operations, and funds for after-school staff development have been eliminated, but the performance of instructional specialists and the expeditors has intensified correspondingly and the result continues to be consistent improvement in implementation. Three of the four schools have well-functioning human-interaction laboratories also, which form an essential non-cognitive complement to the cognitive emphases of this model. The observation data confirm that small-group instruction takes place twice as frequently as whole class instruction, aides were observed assisting students with very high frequency, though parent scholars somewhat less so; the model showed the highest incidences of general cognitive approval and specific praise for cognitive accomplishments, and was one of the two highest in manifestations of supportive correction.

#### Parent Involvement

This component continued to be well implemented in the program as a whole. Policy Advisory Committees (PACs) in most sites continued to be highly active and the model-management system functioned effectively throughout the program. As will become evident in the Attainment of Objectives section below, however, the high level of parent involvement which once characterized almost every site in the program is in need of restoration at a number of sites where complacency rather than activity appears to have gained a hold.

## Supportive Services

There has been no change in the financial straits which this component has been forced to face in the most recent years, including 1976-1977; program funding has not increased and the rate of inflation has hardly subsided. There was evidence of widespread efforts, this year, however, to make the most of the situation and to search out either the most economical (but effective) sources for special contracts or to work for the most favorable arrangements possible with community service agencies.

## Expansion Program

The expansion program has been added a grade at a time since it was introduced in Spring, 1975. It operated in second grade for the first time in 1976-1977 and the total program (K-2) at all 28 sites included more than 8000 students. Implementation data were obtained from District Liaison Assistant's reports, the Program Management Assistant's report and from Spring, 1977 COR observation data collected in two rounds at all second grade classes and in an approximately one-third stratified sample (by grade and Option) of K-1 classes.

The program appears to be achieving satisfactory implementation overall. This is the first year the program has not suffered a freeze on the use of funds. This has resulted in a considerably smoother extension of the program to second grade than was the case when it was introduced in kindergarten and first grade. Option IV (which is a local adaptation of the Bank Street approach) appears to be the best implemented of the program's instructional types, though this may be substantially due to the fact that the philosophy and techniques of this approach were the most familiar to teachers prior to joining the program. Option II, which was an attempt to combine Bank Street materials with Behavior Analysis techniques, has the most implementation problems; teachers indicate considerable confusion regarding this option. The observation data indicate that aides and parent scholars are regularly assisting students in small groups across the program; instruction in general seems to occur, however, as a mix of whole class and small-group instruction; Option IV and Option V (both with a Bank Street orientation, the latter in combination with bilingual materials) have the highest incidences of "teacher encourages expression of feelings or needs," but have low incidences of "teacher clarifies/expands students' response" and of the two, only Option V has a high occurrence of "supportive correction." Option I, a derivative of the Behavior Analysis approach, shows the highest occurrences of specific praise and giving rewards, but is high on disapproval also.

Staff development has improved noticeably since the hiring of special training coordinators. Parent involvement has been receiving increased attention also since a parent involvement coordinator was hired and positive results are beginning to show. The provision of some supportive services is also gradually becoming a reality.



## ATTAINMENT OF OBJECTIVES

The first objective below required analysis of February, 1977 city-wide testing results. Stanford Early School Achievement Tests (SESAT) were administered to all kindergarten pupils in the system; California Achievement Tests (CAT) were administered to all Grade 1-12 students. Test data were available for more than 5000 pupils in the original program, K-3, and for more than 7000 in the expansion program, K-2. Seven of the eight subdistricts of the school system were involved in the comparisons to be described below; a total of almost 60,000 students were tested K-3 in these seven districts, the number per district varying from approximately 1000-2800 students per grade.

Analysis of the data should be apparent from the working of the objectives. Expansion Program schools were variously expected to maintain stanine level with the previous year's performance or perform better than each of their respective total districts in terms of percentages of pupils scoring below the 18th or at or above the 50th national percentile in reading and mathematics. The table at the end of the text summarizes the degree to which each criterion or combination of criteria within each subobjective of Objective 1 was attained.

Data for Objectives 2 and 3 were obtained from quarterly recording forms developed by the evaluation unit, except for the medical and dental data which did not require periodic data collection. Attainment was examined on a school by school basis.

Objective 1: A positive effect on pupil achievement will be attributed to the program if five of the following seven subobjectives are attained, based on the results of the February, 1977 city-wide administration of the Stanford Early School Achievement Test (SESAT) in Kindergarten, and the California Achievement Test (CAT) in Grades 1-3:

- A. Kindergarten pupils in at least 3/4 of the expansion program schools will obtain a mean raw score in the Letters and Sounds and Mathematics subtests of the SESAT that falls within the same national pupil stanine as was achieved by those same schools in February, 1976.
- B. In Total Reading and Total Mathematics on the CAT, first grade pupils in at least 3/4 of the expansion program schools will obtain a mean Achievement Development Scale Score (ADSS) that falls within the same national pupil stanine as was achieved by those same schools in February, 1976.
- C. In Total Reading and Total Mathematics on the CAT, first grade pupils in at least 2/3 of the expansion program schools will have a lower percentage of pupils scoring below the National 18th percentile or a higher percentage scoring at or above the 50th percentile than the total first grade group in each district in which the schools are located.



- D. In Total Reading and Total Mathematics on the CAT, second grade pupils in at least 2/3 of the expansion program schools will have a lower percentage of pupils below the National 16th percentile or a higher percentage at or above the 50th percentile than the total second grade group in each district where the schools are located.
- E. In Total Reading and Total Mathematics on the CAT, second grade pupils in five of the seven models in the regular program will have a lower percentage of pupils below the National 16th percentile or a higher percentage at or above the 50th percentile than the total second grade group in each district in which the models are found.
- F. In Total Reading and Total Mathematics on the CAT, third grade pupils in at least four of the seven models in the regular program will have a lower percentage of pupils below the National 16th percentile or a higher percentage at or above the 50th percentile than the total third grade group in these same models in February, 1976.
- G. In Total Reading and Total Mathematics on the CAT, third grade pupils in at least four of the seven models in the regular program will have a lower percentage of pupils below the National 16th percentile or a higher percentage at or above the 50th percentile than the total third grade group in each district in which the models are found.

This objective was considered partially attained overall. Two subobjectives were fully attained; and for three others, the performance criteria were met in at least one of the two subject matter areas.

Three-fourths of the expansion program schools in both kindergarten and first grade, as required in the objective, obtained at least the same national pupil stanine in both reading and mathematics in 1977 as in 1976 testing.

In kindergarten in the Letters and Sounds subtest in 1977, 9 of the 27 schools (the K test data for one of the expansion schools was lost so the N at this grade level is 27 rather than 28) had higher stanines than in 1976. Sixteen of the schools had scores between the 77th and 96th %iles (stanines 7 to 9); seven scored between the 62nd and 72nd %iles (stanine 6); the remaining four scored between the 42nd and 54th %iles (stanine 5). In the Mathematics subtest 8 of the 27 schools had higher stanines than 1976. Five of the schools had scores between the 80th and 94th %iles (stanines 7 and 8); eight scored between the 64th and 76th %iles (stanine 6); eleven scored between the 44th and 58th %iles (stanine 5); the remaining three scored between the 18th and 38th %iles (stanines 3 and 4).

In first grade in Total Reading in 1977, 7 of the 28 schools had higher stanines than in 1976. Ten schools had scores between the 62nd and 75th %iles (stanine 6); fifteen scored between the 44th and 59th %iles (stanine 5); the

three remaining scored between the 31st and 33rd %iles (stanine 4). In Total Mathematics in 1977, 9 of the 28 had higher stanines than in 1976. Fourteen schools scored between the 60th and 80th %iles (stanines 6 and 7); ten scored between the 44th and 57th %iles (stanine 5); the remaining four scored between the 29th and 37th %iles (stanine 4).

The Expansion Program schools in 1977 did not meet the criteria for Subobjective C, regarding first grade performance in 2/3 of the schools, nor the criteria for Subobjective D, regarding second grade performance in 2/3 of the schools. The criteria focused on the schools' percentages below the 16th or at or above the 50th percentile in Total Reading and Total Mathematics in comparison with their respective district's percentages. In first grade, only 12 of the schools (19 were required for 2/3) met the full criteria; however, 14 met the percentage criteria in Total Reading, and 16 met them in Total Mathematics. In second grade, only 8 of the schools (again, 19 were required for attainment) met the full criteria; but 10 met the percentage criteria in Total Reading 21 of the 28 schools had less than 16% below the 16th %ile (range: 0-14%), the remaining 7 had 17-26%. Regarding percentages at or above the 50th %ile: four schools had 72-85%; nine had 56-66%, ten had 42-49%; the remaining five had 27-38%. The seven districts had a range of 6-10% below the 16th %ile and a range of 52-63% at or above the 50th %ile. In Total Mathematics in first grade 22 of the 28 schools had less than 16% below the 16th %ile (range: 0-15%), the remaining 6 had 17-27%. With respect to percentages at or above the 50th %ile: five schools had 77-80%; fifteen had 50-69%; five had 41-49; the remaining three had 13-34%. The seven districts had a range of 5-14% below the 16th %ile and a range of 51-64% at or above the 50th %ile. In second grade in Total Reading, 13 of the 28 schools had less than 16% below the 16th %ile (range: 0-14); 13 had 16-24%; the remaining 2 had 31 and 41% respectively. Regarding percentages at or above the 50th %ile: five had 61-83%; eight had 51-59%; five had 40-47%; six had 30-38%; the remaining four had 21-28%. The 7 districts had 6-14% below the 16th %ile and 48-61% at or above the 50th %ile. In Total Mathematics in second grade, 17 of the 28 schools, had less than 16% below the 6th %ile (range: 0-14%); 4 had 16-18%; the remaining 7 had 21-28%. With respect to percentages at or above the 50th %ile: six had 60-75%; seven had 50-59%; ten had 40-49%; the remaining five had 25-39%. The 7 districts had 8-16% at or above the 50th %ile.

In the Original Program in second grade, five of the seven models (Bank Street, EDC, Florida Parent, Parent Implemented and Philadelphia Process) met the required percentage criteria in Total Mathematics, but not in Total Reading, allowing Subobjective E to be considered only partially attained. In Total Reading only four models satisfied the criteria (Bank Street, Behavior Analysis, Bilingual and Philadelphia Process); only two models (Bank Street and Philadelphia Process) met the criteria in both subject matter areas. Only one model (Bank Street) had as high as 16% below the 16th %ile and 48-61% above the 50th. In Total Mathematics five of the models had 8-14% below the 16th %ile; two (Behavior Analysis and Philadelphia Process) had 17 and 19% respectively.

With respect to percentages at or above the 50th %ile, only one model (Bilingual) had less than 50% (45%); the other six ranged from 51-63%. The six districts had 8-16% below the 16th %ile and 46-61% at or above the 50th %ile.

In comparing Original Program performance in third grade in 1977 with that attained in 1976 (Subobjective F), the findings are as follows. Five models (Bank Street, Bilingual, EDC, Parent Implemented and Philadelphia Process) met the percentage criteria in Total Reading, and four models (Bank Street, Bilingual, EDC and Florida Parent) met the criteria in Total Mathematics. Only three models (Bank Street, Bilingual, and EDC) met the criteria for improvement in both subject matter areas, however, the subobjective was only partially attained. In Total Reading in 1977, in percentages below the 16th %ile, one model had 17%, four had 23-27% and two had 33 and 35% respectively. In relation to percentages at or above the 50th %ile: one had 40%, four had 35-39%, and the other had 25%. In Total Mathematics in 1977, as regards percentages below the 16th %ile, four models had 13-14%, the other three had 21-27%. With respect to percentages at or above the 50th %ile, two models had 51 and 53% respectively, the other five, 41-45%.

In 1977 in third grade in comparison with their respective districts (Subobjective G), models in the Original Program performed as follows. Four models in Total Mathematics (Behavior Analysis, EDC, Florida Parent and Parent Implemented) had either a lower percentage of pupils below the 16th or a higher percentage at or above the 50th %ile than their respective districts, thus meeting the percentage criteria in this area. In Total Reading, however, only three models (Bank Street, Parent Implemented and Philadelphia Process) matched the percentage criteria and the subobjective had to be considered only partially attained. In Total Reading in 1977 as regards model percentages below the 16th %ile, details were given above for Subobjective F (models ranged from 17-35%); the six districts ranged from 18-24%. In relation to percentages at or above the 50th %ile, while the seven models showed a range from 25%-40%, the districts ranged from 32-41%. In Total Mathematics in 1977, in relation to below 16th %ile performance, the seven models showed a 14-27% range; the six districts showed a 17-23% range. With respect to percentages at or above the 50th %ile, while the seven models ranged from 41-53%, the six districts showed a range from 41-52%.

Objective 2: A positive effect on the provision of special supportive services will be attributed to the program if both of the following subobjectives are met:

- A. Provision are made in each school for supplementary medical and dental services either through a negotiated contract or through specific arrangements of a non-contracted nature with agencies in the community.
- B. The School Community Coordinator at each school visits at least 85% of the families who have children in Follow Through, and is con-



sistently engaged in helping at least 50% of those families, identified as in need of social services.

This objective was partially attained. At least half of the 18 original schools met the two subobjectives fully or to such an extent that partial attainment of the total objective is in order.

During 1976-1977 13 of the schools had either negotiated contracts or specific arrangements with community agencies for both medical and dental services, and there was, therefore, partial attainment of this subobjective. One other school had a contract for medical services only; two others for dental services only. The remaining two schools had no special arrangements for supplementary medical or dental services. In addition to the medical and dental services called for in the objective, fourteen schools had negotiated contracts or special arrangements with community agencies for psychological services.

At least 85% of the families had been visited in eight schools (actual range 90-100%); 51-84% in five other schools; the remaining five schools showed 10-41%. At least 50% of the families identified as in need of social services were being consistently helped in 15 of the 18 schools; the actual percentages helped in these 15 schools ranged from 53-100%. Two other schools were helping 30-39% of the needy families respectively; one school was unable to provide this kind of help. This subobjective was considered at least partially attained in light of the above accomplishments.

Objective 3: A positive effect on parent involvement will be attributed to the program if both of the following subobjectives are met:

- A. The Executive Committee of the Parent Advisory Committee (PAC) at each school in the regular program will involve at least 15 other parents monthly in committee work to plan parent activities, and will work jointly with at least two community action groups on projects in the course of a year.
- B. At least 70% of the parents in the program will attend the school meeting or affair during the school year and there will be at least one hour of parent volunteer time monthly to match the number of children in the program.

This objective was not attained.

In seven of the eighteen original schools at least 15 parents (15-28 across the seven sites) other than Executive PAC members were involved in committee work monthly; in five others 9-14 were involved; but in the remaining six schools only 1-8 were involved. In ten of the schools the parents worked jointly with at least two community groups during the course of the year; five other schools worked with at least one community group, but the remaining three did not engage in this kind of activity.



Seventy-percent of the parents of Follow Through children had attended at least one meeting during the year at 9 of the 18 schools; at least 35% of the parents had attended in five others, but less than this had attended in the remaining four schools. An average of one hour per month in volunteer time to match the number of Follow Through children was attained in only five schools; six others had at least a half-hour on the average, but the remaining seven averaged less than half an hour per month.

### SUMMARY AND CONCLUSIONS

It has now been nine years since the original, nationally affiliated Follow Through project was introduced in kindergarten (1968-1969) in Philadelphia. The project has operated K-3 since 1971-1972. Since Spring, 1975 a locally developed Follow Through expansion program funded exclusively under Title I was introduced at the kindergarten level in 27 schools new to the project (one of these schools has been closed since then), and in the remaining classes at two of the original project schools. During 1976-1977 the Expansion Program operated at the K-2 range and is planned to be introduced in third grade in 1977-1978.

Of the original program models in 1976-1977 Bank Street and Behavior Analysis continued to be very well implemented. The Bilingual Model continued to improve, especially in the school where improvement was most needed. The EDC Model again showed good implementation. The Florida Parent Model showed a lag in implementation early in the year, but improved considerably over the ten months. The Parent Implemented and Philadelphia Process Models, which showed considerable improvement last year, appeared to attain an even higher level of implementation this year.

The expansion program which consists of four options, is achieving satisfactory implementation overall. Introduction of the program at second grade in 1976-1977 was a smoother process than had been the case for the previous two grades. Option IV, a local adaptation of the Bank Street approach, appeared to be the best implemented of the options. This may, however, be because of basic teacher familiarity with the philosophy and techniques of the model.

The global achievement objective was considered partially attained. Expansion program schools maintained the same high level of performance of the previous year in both reading and mathematics at kindergarten and first grade. They did not, however, consistently out-perform their respective total districts in these two subject matter areas at first and second grade. Follow Through models in the original program met the performance criteria established in at least one of the two subject matter areas in second and third grade in comparison with their respective total districts, and in the latter grade also with respect to improved performance over last year. It is apparent from the data that while level of performance in general is high in both the

original and the expansion program (which has absorbed the comparison sites for the former), total district performance has become high also due to the impact of other Title I Programs.

The parent involvement component continues to be well implemented throughout the original program in a number of major respects. Judging by the non-attainment of the objective for this component, however, it is apparent that there is at least a need for reexamination of performance at the majority of the sites and a need for renewed endeavor at some.

In the supportive services area, in spite of continued reduction of available funds, close to half of the 18 original schools met the established criteria in full. Most of the other schools at least partially met the various performance criteria for this component.

Both the original and the expansion program are functioning well in general. Second grade performance in the expansion program did not meet the criteria established, but this is its first year of operation at this grade level. Third grade performance in the original program, while continuing to improve, does not yet match its level of performance in second grade. With respect to level of performance in the original program, the four highest achieving models continue to be Bank Street, Behavior Analysis, Parent Implemented and Philadelphia Process.

TABLE 1

NUMBER OF EXPANSION SCHOOLS (N=28) AND NUMBER OF ORIGINAL FOLLOW THROUGH MODELS (N=7)  
 MEETING CRITERIA APPLICABLE TO OBJECTIVE 1. AN ASTERISK (\*) INDICATES THIS PORTION OF THE OBJECTIVE WAS ATTAINED.  
 Note: Each criterion compares scores obtained by pupils at the same grade level

| CRITERIA                                                                                                                                      | G R A D E S        |             |                   |               |                   |            |               |                   |            |               |                   |            |
|-----------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------|-------------------|---------------|-------------------|------------|---------------|-------------------|------------|---------------|-------------------|------------|
|                                                                                                                                               | KINDERGARTEN       |             |                   | FIRST GRADE   |                   |            | SECOND GRADE  |                   |            | THIRD GRADE   |                   |            |
|                                                                                                                                               | Letters and Sounds | Mathematics | Both Areas        | Total Reading | Total Mathematics | Both Areas | Total Reading | Total Mathematics | Both Areas | Total Reading | Total Mathematics | Both Areas |
| Expansion Schools in same National Stanine in 1977 as in 1976 Testing                                                                         | 23*                | 22*         | 20 <sup>1</sup> * | 23*           | 24*               | 21*        |               |                   |            |               |                   |            |
| Expansion Schools Having a Lower % of Pupils Below 16th Percentile than Respective Total Districts                                            |                    |             |                   | 11            | 11                | 7          | 8             | 12                | 7          |               |                   |            |
| Expansion Schools Having a Higher % of Pupils At/Above 50th Percentile than Respective Total Districts                                        |                    |             |                   | 11            | 15                | 10         | 6             | 9                 | 3          |               |                   |            |
| Expansion Schools Having Either a Lower % of Pupils Below the 16th or a Higher % At/Above the 50th Percentile than Respective Total Districts |                    |             |                   | 14            | 16                | 12         | 10            | 14                | 8          |               |                   |            |
| Models Having a Lower % of Pupils Below 16th Percentile than Respective Total Districts                                                       |                    |             |                   |               |                   |            | 2             | 2                 | 0          | 1             | 4*                | 0          |
| Models Having a Higher % of Pupils At/Above 50th Percentile than Respective Total Districts                                                   |                    |             |                   |               |                   |            | 4             | 5*                | 2          | 3             | 2                 | 1          |
| Models Having Either a Lower % of Pupils Below the 16th or a Higher % At/Above 50th Percentile than Respective Total Districts                |                    |             |                   |               |                   |            | 4             | 5*                | 2          | 3             | 4*                | 1          |
| Models Having a Lower % of Pupils Below 16th Percentile in 1977 than in 1976 Testing                                                          |                    |             |                   |               |                   |            |               |                   |            | 3             | 4*                | 2          |
| Models Having a Higher % of Pupils At/Above 50th Percentile in 1977 than in 1976 Testing                                                      |                    |             |                   |               |                   |            |               |                   |            | 5*            | 4*                | 3          |
| Models Having Either a Lower % of Pupils Below the 16th or a Higher % At/Above the 50th Percentile in 1977 than in 1976 Testing               |                    |             |                   |               |                   |            |               |                   |            | 5*            | 4*                | 3          |

<sup>1</sup>One expansion school's Kindergarten scores were lost by the scoring service; the N, then, is 27 rather than 28 at this level.

## INSTITUTIONS FOR NEGLECTED AND DELINQUENT CHILDREN

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

This Title I project consists of the separate programs of 11 different custodial care institutions.

### RATIONALE

Many pupils under the care of institutions participating in this project are from culturally deprived backgrounds; their basic skills in reading, mathematics, and other subjects lag far behind the national norms for their ages and grade levels. Therefore, Title-I-eligible institutionalized pupils who either attend school within the institution or attend public or private schools receive additional reading and/or mathematics instruction. They may also receive other services related to those subjects.

### EXPECTED OUTCOMES

It is expected that participating children will improve in reading and/or mathematics skills. In addition, it is hoped that the children will improve in their attitudes toward themselves and others, and in social skills facilitating acceptable interaction with both adults and peers.

### PREVIOUS FINDINGS

Past evaluations (1968-1976) showed that the contracted services were being provided by the institutions receiving funds. During the 1975-1976 school year, all of the institutions provided basic skill programs in reading and/or mathematics. Moreover, each program began to develop appropriate evaluation procedures for monitoring individual pupil progress.

### EVALUATION OF THE CURRENT YEAR

Evaluation of the Institutions for Neglected and Delinquent Children project during the current year focused on the respective processes and accomplishments of the 10 participating institutions' programs.



## IMPLEMENTATION

In 1976-1977 the project's intended mode of operation was fully implemented at ten institutions (Association for Jewish Children, Baptist Children's House, Children's Aid Society of Pennsylvania, Diagnostic Center of the Sisters of the Good Shepherd, Girard College, Methodist Home for Children, the Morrell School, St. Vincent's Home for Children, Youth Services, Inc., and Youth Development Center) and partially implemented at one (Southern Home for Children).

For purposes of this year's evaluation, a program was considered fully implemented if (a) it began when it had originally been scheduled, (b) it provided the majority of services in the basic skills area, (c) a certified reading specialist was directly involved with a reading program, and (d) procedures for determining eligibility were followed. Starting dates for the programs are summarized in Table 1.

In discussions with the evaluator, program directors of most institutions demonstrated a thorough understanding of their respective programs. The one institution that did not begin its program when scheduled had experienced delays due to procedural matters.

Association for Jewish Children. This tutorial program was fully implemented. The reading specialist diagnosed, prescribed, and supervised instructional programs for each child receiving Title I services. Tutors worked individually with these children a minimum of one hour per week.

Because of the psychological and/or social problems experienced by these children, observations by the evaluator of the tutor-tutee relationship seemed inappropriate.

Baptist Children's House. This program was fully implemented. Services began in October and provided one mathematics and three reading programs for its eligible children. These reading programs were supervised by reading specialists who worked directly with small groups and individuals. The mathematics component offered small group instruction.

Observations revealed that after-school tutoring experiences in reading and mathematics were provided to eligible students. However, only two of the four instructors were able to provide the evaluator with descriptive progress and attendance sheets for the students they instructed.

Children's Aid Society of Pennsylvania. This program was fully implemented, beginning its services in September. Instruction was given both individually and in small groups.

Observations of the reading specialist with pupils revealed a variety of reading materials on many different levels and a positive pupil-teacher rapport. The maintenance of detailed, descriptive data on each pupil was readily available to the evaluator. It was from these progress records that work for pupils was assigned.

House-parent tutors were supervised by the reading specialist and educational psychologist. Both worked closely with one another in setting-up an educational program best suited for each child's mode of learning.

Although the evaluator did not observe these sessions because of the nature of the living groups, interviews with all supervisory personnel indicated a well-planned format.

Diagnostic Center. This program was fully implemented. A reading specialist has been working daily with eligible girls both individually and in small groups since September. Because extensive diagnostic testing results were available for every girl eligible for Title I services, individual-prescriptive programs were established and maintained.

Girard College. This program was fully implemented. Reading programs were available for both elementary and secondary students. A mathematics program was conducted for secondary students only.

The secondary reading students were instructed both in small groups and individually by a reading specialist. Elementary students received small-group or individual instruction from an elementary teacher receiving supervision from a reading specialist. Observations during the regular school day revealed a variety of multilevel reading materials available for both reading programs.

The mathematics program for secondary students was conducted by a certified mathematics teacher. Generally, the students worked in small groups during the regular school day.

Observations of both the reading and mathematics programs revealed a positive rapport between teachers and students.

Methodist Home for Children. This program was fully implemented. A reading specialist taught children directly and supervised other reading instructors.

Eligible students received instruction on a rotating eight-week schedule. Instruction was supplemented with library visits and cultural events.

Morrell School. This program was fully implemented. A reading specialist taught small groups of children daily. Title-I-eligible students were scheduled to receive instruction during the regular school day for a minimum of 45 minutes.

Observations revealed a diversity of materials on many different reading levels. A positive teacher-student relationship was apparent.

St. Vincent's Home for Children. This program was fully implemented. Eligible kindergarten and first-grade children received mathematics instruction in small groups and individually, both during and after the regular school day.

A teacher licensed in early childhood education taught children directly and supervised other instructors. Extensive diagnostic testing was available for each child receiving Title I services.

Observations revealed a positive teacher-student rapport and a variety of appropriate mathematics materials.

Southern Home for Children. This program was partially implemented beginning its services mid-December. The late starting date was related to procedural matters between the institution and the School District. Tutorial services offered by alternative school students and adult volunteers were held during the regular school day and in the evenings. Instruction was supervised by a reading specialist.

Required logs of educational services provided to eligible Title I children were not maintained. However, questioning of the coordinator about randomly selected students revealed a thorough knowledge of those individuals' academic strengths and weaknesses.

Youth Development Center. This program was fully implemented. It consisted of a basic skills component (and related photography) and General Education Development (GED) instruction. All classes were given during the regular school day, except for the late afternoon photography class.

Observations seemed to indicate a positive rapport between each of the two reading teachers and the students. A variety of multilevel reading materials were available in the reading room. The required reading supervision was provided by the reading supervisor of district seven.

Observations of the mathematics program during the regular school day revealed students working individually on teacher-made worksheets. Although detailed logs of pupil progress were not maintained, discussions with the instructor indicated a knowledge of students' weaknesses.

Youth Services, Inc. This program was fully implemented. Title-I-eligible children received reading and/or mathematics instruction after the regular school day either in their residence cottage or in an on-site school facility.

The reading program was supervised by a reading specialist who taught children directly and who was available for consultation. Logs describing activities and pupil progress were available from only one of the teachers.

Discussions with the project director indicated that a change in location for Title I instruction would be made because the cottage residences did not provide well-lighted and quiet space necessary for instruction.

#### ATTAINMENT OF OBJECTIVES

Objective 1: Each institution which provides mathematics instruction in this project will provide it from October to June to its underachieving children for a minimum of one hour per week per child. Detailed logs of the duration and content of each session will be maintained.

This objective was considered partially attained because of a late starting date at one institution and incomplete logs describing duration and content of instructional sessions at three institutions.

The Institutional Program Information Form was forwarded to all institutions during the Fall by the evaluation team. The form requested information pertaining to the time each week devoted to the instruction of mathematics for each child.

Those institutions which provided mathematics services as scheduled (Association for Jewish Children, Baptist Children's House, Girard College, St. Vincent's Home for Children, Youth Development Center, Youth Services, Inc.) provided a minimum of one hour per week per child with the majority beginning services in September.

One institution (Southern Home) did not begin services until mid-December. The late starting date was related to procedural matters between the institution and the School District.

Three institutions (Baptist Children's House, Southern Home for Children, Youth Development Center) did not maintain logs describing duration and content of instructional services. It must be noted, however, that questioning of some instructors about randomly selected students revealed a thorough knowledge of those individuals' academic strengths and weaknesses.

Objective 2: Each institution which provides reading instruction in this project will provide it from October to June to its eligible children for a minimum of one hour per week per child. Detailed logs of the duration and content of each session will be maintained.



This objective was considered partially attained because of a late starting date at one institution and incomplete logs describing duration and content of instructional sessions at two institutions.

The Institutional Program Form was forwarded to all institutions during the Fall by the evaluation team. The form requested information pertaining to the time each week devoted to the instruction of reading for each child.

Those institutions which provided reading services as scheduled (Association for Jewish Children, Baptist Children's House, Children's Aid Society of Pennsylvania, Diagnostic Center, Girard College, Methodist Home, Morrell School, Youth Development Center, Youth Services) provided a minimum of one hour per week per child with the majority beginning services in September.

One institution (Southern Home) did not begin services until mid December. The late starting date was related to procedural matters between the institution and the School District.

Two institutions (Southern Home, Youth Services) did not maintain logs describing duration and content of instructional services. It must be noted, however, that questioning of some instructors about randomly selected students revealed a thorough knowledge of those individuals' academic strengths and weaknesses.

All institutions providing reading services were served by certified reading specialists. Some of these specialists worked with children directly and/or supervised other instructors.

Objective 3: Students receiving at least five weeks of mathematics instruction in this project during the 1976-1977 school year will improve their basic mathematics skills to the extent that teachers using the Institutions Skill Record for Mathematics at the end of the students' respective participation in the project will rate 75% of them as having gained additional knowledge of fractions, addition, subtraction, word problems, multiplication and/or division.

This objective was fully attained. The 75% criterion was attained in all six areas investigated.

The Institutions Skill Record for Title I Mathematics Programs was completed for each child receiving a minimum of five weeks of instruction at his/her institution. Each teacher was directed to rate the progress of each child in mathematics instruction listed on the form: "additional knowledge gained," "no progress," or "area not covered." These ratings were determined from the results of various standardized and/or criterion referenced tests administered at each institution.

An analysis of the data revealed that the 75% criterion was attained in the areas of fractions (87%), addition (93%), subtraction (91%), word problems (97%), multiplication (89%), and division (88%).

Objective 4: Students receiving at least five weeks of reading instruction in this project during the 1976-1977 school year will improve their basic reading skills to the extent that teachers using the Institutions Skill Record for Reading at the end of the students' respective participation in the project will rate 75% of them as having gained additional knowledge of word recognition skills, comprehension, and/or oral reading.

This objective was fully attained. The 75% criterion was attained for all the areas investigated.

The Institutions Skill Record for Title I Reading Programs was completed for each child receiving a minimum of five weeks of instruction at his/her institution. Each teacher was directed to rate the progress of each child in reading by checking one of the following ratings for each category of reading instruction listed on the form: "additional knowledge gained," "no progress," or "area not covered." These ratings were determined by the results of various standardized and/or criterion referenced tests administered at each institution.

An analysis of the data revealed that the 75% criterion was attained in the areas of word recognition skills (87%), comprehension (91%), and oral reading (92%).

#### SUMMARY AND CONCLUSIONS

The Institutions for Neglected and Delinquent Children project was established to meet the needs of institutionalized children, who, because of neglect and/or delinquency, have severe academic, social, and/or cultural deficiencies. The project's intended mode of operation was fully implemented at 10 institutions and partially implemented at one.

All 11 programs reported implementation of their Title I services prior to January. One institution began its services after the scheduled October date because of procedural matters between the institution and the School District. It should be noted that this is the first year that all institutions were reported operative by mid-year.

Programs varied widely from institution to institution and included educational activities integrated within the institution's regular school day and tutoring activities taking place during or after school. All programs involved either professionals and/or highly qualified volunteers supervised by a specialist in the subject area. Students received instruction individually or in small groups.

Seven institutions provided tutorial services. They included Association for Jewish Children, Baptist Children's Home, Children's Aid Society of Pennsylvania, Methodist Home for Children, St. Vincent's, Southern Home for Children, and Youth Services. Four provided schooling on their campuses for children under their care. These included Diagnostic Center of the Sisters of the Good Shepherd, Girard College, Morrell School and Youth Development Center. Both types of programs used Title I funds to provide instructional personnel, materials, and services that would otherwise be unavailable to their students.

The objectives dealing with students' gains in reading and/or mathematics skills were fully attained. The objectives addressing the length of time programs would operate and the maintenance of detailed logs noting duration and content of each session were partially attained. Consequently, proposed reading and/or mathematics services were provided to eligible children and at least 75% of the children receiving these services were reported to have gained additional knowledge.

TABLE 1

ACTUAL STARTING DATES OF REGULAR-SCHOOL-YEAR  
"INSTITUTIONS" PROGRAM

| First Month of<br>Program Operations<br>1976-1977 | Number of<br>Institutions Starting<br>Their Programs |
|---------------------------------------------------|------------------------------------------------------|
| September                                         | 8                                                    |
| October                                           | 2                                                    |
| November                                          | 0                                                    |
| December                                          | 1                                                    |



## LEARNING CENTERS

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

The Learning Centers project provides a model of supportive teacher behavior and classroom organization which utilizes an informal, individualized laboratory approach. Through the use of educational aids, activities, and games, pupils are given self-chosen experiences in basic skill areas. Teachers, parents, and administrators from target schools are served in workshops and consultations.

### RATIONALE

Children from target areas tend to have low self-images, and deficiencies in oral language skills and inquiry techniques. They lack skill in symbolizing and in inductive thinking. The Learning Centers project provides these children with a learning atmosphere structured to correct their deficiencies through an activity-centered approach.

### EXPECTED OUTCOMES

It is expected that the learning atmosphere will be warm, caring, and non-punitive. Pupils should improve in basic skills, in oral and written communication, and in physical, motor, and manipulative abilities. They should become contributing members of a group, and develop an understanding of themselves and their relationship to society. The pupils should learn to make choices, to be self-directive in learning and to be independent. Also, their creative and aesthetic expression should increase.

### PREVIOUS FINDINGS

During the four years, 1968-1973, pupils in the Peirce and Waring centers showed substantial progress in prereading, reading, and auditory vocabulary skills. The reading-achievement scores of pupils in most grades at the Durham center were found to be higher than the District 2 norms.

Since 1973 the project has succeeded in meeting a variety of pupil academic achievement objectives. LC pupils exceeded comparable nonparticipating pupils in the development of skills in problem solving, mathematics-concept formation, and written communication.

Since 1973, the large numbers of teachers, parents, and administrators who voluntarily sought assistance in either the Teacher-Parent Center or the Learning Center Headquarters, and the positive responses to the Teacher Center Survey, were interpreted as an indication of both the need for and the success of these components of the project.

## EVALUATION OF THE CURRENT YEAR

The current year's evaluation of the Learning Centers project focused on the mathematics-concept formation, mathematics achievement, and communication skills of participating pupils, and the effectiveness of the Teacher-Parent Center in changing teacher behavior and attitudes.

### IMPLEMENTATION

All three Learning Centers (LC) project components were fully operational during 1976-1977. LC laboratories operated in ten schools, the Teacher-Parent Center assisted School District staff and parents in making instructional materials and in learning instructional skills, and the headquarters office provided planning support to administrators.

Of 11 LC laboratories operated in ten schools, nine were oriented to mathematics instruction, and one each to the teaching of communication skills and industrial arts. On the average the LC teachers saw participating children 2-3 times per week, ranging from one to ten times. During 25 observations LC teachers generally used concrete mathematics teaching aids (hundred board, Cuisenaire rods, etc.) and provided applied mathematics experiences (graphing, measuring, etc.). Most of the labs were organized on a small-group basis. Children were frequently given a choice of activities, including educational games (both commercial and teacher-made). While activities in the mathematics labs generally focused on basic arithmetic skills (addition, subtraction, place value), children participating in the Communications Center received instruction in, and used, a variety of media (closed circuit television, photography, drama, choral speaking, and creative writing).

Summaries of the Teacher-Parent Center register and participant file-cards showed that teachers, parents, aides and administrators from 151 of the 170 Title I schools were assisted in making instructional materials and classroom equipment, and in acquiring new teaching strategies and skills. Participants made approximately 4,000 visits to the center in the Durham School, involving themselves in activities ranging from triwall carpentry to learning grouping techniques in the classroom. While coming to the center on their observation days and on their own time after school and on Saturdays, participants had their choice of 73 workshops offered during the year, including such topics as Developing Learning Center Activities, Sorting and Classifying, Fighting Fraction Phobia, the World at Your Windowsill, Learning Activities to Teach the Alphabet, Patterns as a Prerequisite for Reading, Basic Issues in Beginning Reading, and Using Mathematics Teaching Aids. An inservice course for two credits was offered during which the staff provided one-to-one assistance on a topic of the individual participant's choosing. A fully equipped woodshop and a resource room were available for participant use.

Specific workshops were designed for staff members of 21 projects, most of which were funded through Title I, Title 20, Early Childhood and Follow

Through. For example, the staff conducted a total of ten half-day workshops for Mathematics Resource Teachers on the topics of Math Titles, Using Geometry and Measurement to Promote Basic Skills, and Decimals. It should be noted that in this capacity the project was able to serve secondary schools, eight Title I parochial schools and 44 preschool institutions.

Approximately 1,550 teachers, aides and administrators participated in 25 in-school workshops conducted by the staff in areas such as tri-wall furniture, educational games and book-making. The bulk of the on-site workshops were conducted at the request of the Follow Through program. Additional on-site workshops were provided by the adjunct Traveling Teacher Center (TTC) in 12 schools in two districts. Situated three days in each school in a location convenient to all school staff during prep periods, lunch and after school, this center enabled teachers and aides to construct instructional aids and to learn associated instructional strategies. In addition to showing specific aids made, Table 1 indicates teacher satisfaction with the ideas and materials presented, the location of the center in the respective buildings, and the overall usefulness of the experience. Virtually all 203 respondents said they needed more time in the TTC, recommended that the center return to their respective schools, and specified additional topics they would like help with in future workshops.

#### ATTAINMENT OF OBJECTIVES

Objective 1: Pupils in Learning Centers Labs, on the average, will gain at least one (1) instructional level in total mathematics ability as evidenced by 80% mastery on the respective Philadelphia Mathematics Evaluations Tests administered in September 1976 and May 1977.

This objective was attained.

The Learning Centers (LC) teachers and/or the regular classroom teachers administered and scored the appropriate levels of the Philadelphia Mathematics Evaluation Tests at the beginning of the school year, as pupils completed the required instruction for each level, and at year's end. Examination of the LC teachers' records showed that of the 323 pupils tested in both September and May 291 (90%) gained at least one level. The average gain was 1.6 levels which exceeded the one level average gain expected. The LC teachers reported that most of the pupils showing no gain made progress on specific arithmetic skills within their respective levels.

Objective 2: Pupils in the Douglass communications laboratory will demonstrate a proficiency in the use and techniques of media processes by producing a media product that, when shown to peer groups at Douglass, will communicate the major concepts that the creators of the media product intended. A sample of peer groups viewing the product will correctly identify 50% of the creator-intended concepts after being exposed to the media product.

This objective was attained.

The Communications Laboratory teacher showed a videotape of a presentation prepared by center pupil on the works of Langston Hughes to 15 of the center pupils' peers from the same classes. After viewing the videotape in the school's television studio, the children were asked individually to tell what they thought about the presentation and to talk about the poem they liked best. All children's responses were recorded on audiocassettes and later transcribed by the center teacher. The center teacher also identified four "concepts" that she and the children had intended to communicate to the peer pupils by means of the Langston Hughes presentation. Using these "concepts," the evaluator constructed a four-item recording form to score the transcripts of the children's responses in terms of the absence or presence of each "concept." The items identified the pupils' ability to (1) express opinions on the subject, (2) demonstrate awareness that Langston Hughes was a black writer who wrote about the difficulties experienced by his people, (3) name their favorite poem, and (4) tell what that poem was about.

On the four-item recording form, the 15 children who responded to the presentation averaged 2.4 items. All 15 children identified at least two of the four items, thereby meeting the 50% criterion.

Objective 3: Teacher-Parent Center staff will provide 20% more on-site workshops for teachers and parents from September 1977 to May 1978 than they provided from September 1976 to May 1977 in which basic skills teaching materials and classroom furnishing will be made by participants as indicated by a log kept by the center staff.

This objective was attained.

The Teacher-Parent Center log verified on a sample basis by evaluator observations, showed that the center staff conducted 25 on-site workshops during 1976-1977 versus 17 during 1975-1976, increasing the number of on-site workshops by 47% which surpassed the 20% expected. During five on-site observations, the evaluator saw teachers, aides, and administrators constructing a variety of tri-wall furniture pieces and educational games by using the raw materials and tools brought to each school by the center staff.

Objective 4: Teachers who have been voluntary participants in the Teacher-Parent Center for at least two years will report changes in teacher behavior and understanding of the Learning Center approach as evidenced by classroom atmosphere, materials selection, teacher behavior and pupil behavior as indicated by a Teacher-Parent Center Survey (self-report).

The attainment of this objective could not be determined because only 13 of 40 (33%) questionnaires mailed to teachers who visited the Teacher-Parent Center were returned.



To assess changes in the teachers' behaviors, a questionnaire was developed jointly by the center staff and the evaluator. Free-response questions were constructed to determine teacher perception of how the center had helped them grow professionally in areas such as classroom organization, approach toward children and teaching, and their own independence in continuing to grow. Teachers were asked to indicate in what ways the center was a valuable support in terms of a source of ideas and a place to build on and expand their own ideas. An item was also included which asked teachers to describe what happened to learning games and aids and classroom furniture made at the center and how each was used in their classrooms.

Teacher-Parent Center staff selected from their participant file 50 teachers who had visited the center several (four or more) times during each of the previous two years. A questionnaire was mailed to each teacher selected, but ten were returned for such reasons as teacher transfer or termination of employment, and the closing of several Day Care centers. Of the 13 questionnaires returned by participants, one was completed by a parent-aide who had been erroneously included. Although the 12 teachers were not considered sufficient to confidently assess attainment of this objective, the responses do indicate the impact that the Teacher-Parent Center has had on at least some teachers.

In response to questions on what needs teachers felt and what purposes they had in coming to the center, and how these changed as the teachers continued coming to the center, teachers wrote that initially they came to the center to get ideas and to make activities for their classrooms or else they came as part of other programs. Most teachers reported that their needs/purposes changed from acquiring an awareness of more child-centered instructional strategies and materials, to constructing classroom furniture and manipulative materials, to physically reorganizing their classrooms and revising their methods of lesson planning and evaluation for implementing their newly acquired strategies and materials.

When asked to describe how they felt the center had helped them grow professionally in areas such as classroom organization, approach toward children and teaching, and their own independence in continuing to grow, the majority of teachers responded in somewhat general terms that they were helped to incorporate manipulative materials and "new" instructional strategies in their classrooms. One teacher thought that the center helped her to work more effectively with her pupils through creating learning centers, teaching games and storage areas; another teacher felt able to better organize her classroom and use a more positive approach; and a third teacher was able to find new ways of solving problems, individualizing instruction and organizing her classroom through use of bookcases, tables, and game storage units constructed at the center.

Another item asked the teachers to indicate in what ways they still found the center a valuable support in terms of a source of ideas and a place to build on and expand their own ideas. Generally, the teachers expressed a need for continuous support from the center to acquire new ideas and instructional materials and to expand and exchange ideas. Three teachers' comments were particularly insightful: one teacher viewed the idea of the center as supportive, as a place to go for materials and ideas, and to pool and exchange experiences in revamping old ideas and fostering new ideas; a second teacher found the staff experienced, creative and helpful in giving problem-solving help and in brainstorming and implementing teachers' own ideas; a third teacher felt that the staff and the teachers shared in the excitement of ideas that keeps teaching vital and interesting, without which the teacher felt she would not be as productive and effective.

The teachers were also asked to describe three of the learning games and aids, and pieces of classroom furniture, which they had made during their several visits, and to indicate how and where each was used, including its effectiveness in or contribution to their classroom, how long it lasted, and any suggested changes in design. A wide range of items were reported constructed which were considered effective, motivating and extremely durable. Learning games and aids most frequently mentioned were puzzles, cubes (words, letters, numbers) and language and math games (concentration, Lotto and a variety of games using dice and spinner boards). Teachers also constructed number boards, tic-tac-toe boards, tangrams, a battery-operated matching board, a touch box, and a "birthday cake" (colors, number, seriation, etc.). Most teachers reported constructing classroom furniture with tri-wall, including library corners, cubby holes, table tops, and display racks. Teachers' references to the effectiveness of learning materials made included "pupils enjoy... and care for," "motivational," "sharing activity" and "borrowed frequently by other teachers." Several teachers commented on the durability of items constructed and contrasted them with comparable commercially available products which frequently cannot withstand the hard use of the classroom.

#### SUMMARY AND CONCLUSIONS

The Learning Centers project fully implemented its three components: the Learning Centers Laboratories, the Teacher-Parent Center, and the Headquarters. Eleven Learning Centers Labs provided manipulative learning experiences in basic arithmetic and problem solving, communications and industrial arts. The Teacher-Parent Center assisted teachers, parents, aides and administrators from virtually every Title I school and from 21 federally funded projects to construct educational games, manipulative activities, and classroom furniture and to learn instructional skills. Headquarters staff assisted school district administrators in planning staff development in their respective areas.

Three of the project's four objectives were attained; insufficient data were available to determine the attainment of one objective. Pupils in the

Learning Center Labs exceeded the expected levels of performance both in basic arithmetic skills and in the use of techniques of media processes. Teacher-Parent center staff exceeded the criterion of providing 20% more on-site workshops in which basic skills teaching materials and classroom furnishings were made by participants in their own schools. Two few questionnaires were returned to confidently judge if teachers had changed their classroom behavior and organization as a result of participation in the Teacher-Parent Center. However, teachers who returned the questionnaires were able to identify needs and purposes met and to describe how the center helped them grow professionally. Most teachers expressed a need for the continuous support provided by the staff in acquiring new ideas and materials for their classrooms and in keeping their teaching "vital and interesting." Many instructional materials and pieces of classroom equipment were reported constructed which were considered motivational and enjoyable for the pupils, as well as being extremely durable.

TABLE 1  
SUMMARY OF 207 TRAVELING TEACHER CENTER QUESTIONNAIRES  
RETURNED FROM 12 PARTICIPATING  
SCHOOLS DURING 1976-1977

1. What did you make or learn? (Indicated are the number and percentage of the 207 respondents making the respective responses.)

|                |          |                |          |
|----------------|----------|----------------|----------|
| Hundred Boards | 71 (34%) | Meter Tape     | 22 (11%) |
| Laminating     | 45 (22%) | Balance Beam   | 18 (9%)  |
| Discs          | 36 (17%) | Tags           | 18 (9%)  |
| Cubes          | 35 (17%) | Word Puzzle    | 18 (9%)  |
| Math Game      | 33 (16%) | Mounting Board | 12 (6%)  |
| Blocks         | 31 (15%) | Graphs         | 11 (5%)  |
| Cards          | 30 (14%) | Other          | 40 (19%) |

2. The ideas and materials the TTC was showing me helped me

|      |            |       |         |         |          |
|------|------------|-------|---------|---------|----------|
|      | 1          | 2     | 3       | 4       | 5        |
|      | not at all |       |         |         | greatly  |
| N(%) | 0(0%)      | 5(2%) | 26(13%) | 47(23%) | 129(62%) |

3. The amount of time that I could work with the TTC was

|      |                    |         |         |         |                  |
|------|--------------------|---------|---------|---------|------------------|
|      | 1                  | 2       | 3       | 4       | 5                |
|      | totally inadequate |         |         |         | more than enough |
| N(%) | 45(22%)            | 61(29%) | 53(26%) | 95(16%) | 13(6%)           |

4. The location of the TTC within the building was

|      |              |       |         |         |           |
|------|--------------|-------|---------|---------|-----------|
|      | 1            | 2     | 3       | 4       | 5         |
|      | inaccessible |       |         |         | next door |
| N(%) | 3(1%)        | 2(1%) | 48(23%) | 95(46%) | 49(24%)   |

5. Overall, I found the TTC visit to our school to be

|      |                 |       |         |         |              |
|------|-----------------|-------|---------|---------|--------------|
|      | 1               | 2     | 3       | 4       | 5            |
|      | inconsequential |       |         |         | very helpful |
| N(%) | 0(0%)           | 1(0%) | 74(36%) | 24(12%) | 175(85%)     |

6. My recommendation for the return of the TTC at some future date would be

|      |     |           |    |        |
|------|-----|-----------|----|--------|
| N(%) | Yes | 199 (96%) | No | 3 (1%) |
|------|-----|-----------|----|--------|



TABLE 1 (continued)

SUMMARY OF 207 TRAVELING TEACHER CENTER QUESTIONNAIRES  
RETURNED FROM 12 PARTICIPATING  
SCHOOLS DURING 1976-1977

7. I wish the TTC had come prepared to help us with (the number and percentage of the 207 respondents are indicated).

|                      |    |      |                                                                    |    |       |
|----------------------|----|------|--------------------------------------------------------------------|----|-------|
| More time needed     | 16 | (8%) | More materials                                                     | 7  | ( 3%) |
| More frequent visits | 10 | (5%) | More classroom                                                     |    |       |
|                      |    |      | ideas                                                              | 6  | ( 3%) |
| More non-Math        | 9  | (4%) | Larger items                                                       | 6  | ( 3%) |
| More Language Arts   | 8  | (4%) | Other                                                              | 37 | (17%) |
| Tri-wall             | 7  | (3%) | (includes 32 favorable<br>comments about the<br>TTC <u>as is</u> ) |    |       |

## MOTIVATION

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

The Motivation project offers 10th-, 11th-, and 12th-grade students a wide variety of cultural enrichment, curriculum enrichment, and tutoring experiences designed to motivate them to seek post-high school education, particularly in a college.

## RATIONALE

The Motivation project seeks to remedy seven educational needs of Title I children, which are noted in the Guidelines for Title I projects: (a) improvement of basic skills, (b) knowledge for living in modern American society, (c) experiences which motivate learning, (d) standard English speech, (e) heightened aspiration and motivation, (f) an understanding of the purposes of education, and (g) teachers who understand their pupils' problems.

The Guidelines note also that "a greater proportion of educationally deprived youngsters in low-income areas [should] not only be given a better chance of getting to college but also be equipped psychologically and educationally for success in college." The Motivation project is the only Title I project in Philadelphia whose primary goal is preparing students for college.

## EXPECTED OUTCOMES

It is expected that students will gain entrance into college and will have a sufficiently solid academic foundation to succeed in college.

## PREVIOUS FINDINGS

Previous years' evaluations showed desirable results in the following areas: classroom performance, verbal and nonverbal functioning, occupational and educational aspiration levels, expectations of success, basic skills, parental involvement, attitudes toward school and learning, attendance rates, retention rates, college applications, and college acceptances. Motivation students were entering college at rates higher than would be predicted from their standardized test scores. A higher percentage of Motivation graduates attended programs creditable toward a college degree than high school graduates nationwide. Project parents expressed positive attitudes toward Motivation, and all project teachers reported constructive changes in their own attitudes toward students.

## EVALUATION OF THE CURRENT YEAR

The current evaluation of the Motivation project examined the students' attendance and academic progress in high school and their admissions to colleges and universities.

### IMPLEMENTATION

During the 1976-1977 school year, the project's intended mode of operation was fully implemented.

Each Motivation site had particular assets, problems, and constraints. Therefore, although its goals were the same everywhere, it was impossible for the project to operate identically at all sites. Local variations of Motivation are described below.

In general, Motivation students were block-rostered for English and mathematics classes, and received five extra periods a week in these subjects. Students were provided with a counselor whose sole responsibility was to Motivation students. Tutoring was also available at each site.

In addition to curriculum enrichment, the project provided students with cultural activities. Students attended out-of-class events such as plays, operas, movies, and lectures. They were also encouraged to watch educational television shows and to participate in individual cultural activities.

The following paragraphs describe some of the specific characteristics of the Motivation project at its various sites.

#### Bartram

Students were housed in an annex that contained only Motivation students. Diagnostic tests, designed by project English and mathematics teachers, were administered to incoming 10th graders. Students who performed poorly on the mathematics test repeated Algebra 1. Activities included open talk sessions, an Olympics program, ecology projects, and international foods, drama, home maintenance, fashion, dance and photography clubs.

#### Bok

The project at Bok had neither a coordinator nor extra periods of English and mathematics. The most essential Motivation elements were scheduled. Basically, the program included tutoring, counseling, and cultural events. Parents assisted in orienting new parents and students.

### Edison

Some students attended Haverford College every Saturday for tutoring classes. A few students served as "big brothers" with St. Christopher's Hospital mental clinic. Parent participation increased over past years and attendance at meetings improved.

### Franklin

The Sun Oil Company sponsored a tutoring program for students. A few students participated in the Animal Laboratory Technician program sponsored by the Philadelphia College of Podiatry. Some students participated in the Student Awareness Exchange Program with the George School of Yardley, Pa. and the Moorestown (N.J.) Friends School.

### Kensington

Kensington's program was different from other project schools in several ways. Because only girls attend Kensington. Edison's Motivation students occasionally attended cultural events with them. Kensington's Motivation students had their own counselor this year. Because of the large number of Spanish-surnamed students, Spanish-oriented cultural events were scheduled.

### Penn

The counselor provided individual and small-group counseling on a regular basis. The Career Resource Center at the school provided much career-related information for Motivation students. The project staff offered a course on how to take examinations. One hundred ninety-seven Motivation students participated as volunteers for the Variety Club Telethon.

### South Philadelphia

South Philadelphia's Motivation program had a strong parent component. Students received additional time for English, mathematics, chemistry, and physics. More than half the Motivation students received voluntary tutoring. Fourteen Motivation students were inducted into the National Honor Society.

### Strawberry Mansion

The project was highly structured which included cultural events, tutoring, open-talk sessions, and an academic enrichment component. The Motivation students had their own counselor. The school had its first graduating class. Motivation students provided Christmas decorations for wards at Philadelphia General Hospital.



### University City

Students were rostered for extra classes before school because of scheduling difficulties. In project English classes, students were taught vocabulary building, writing, and developmental reading to improve comprehension and reading rates. In mathematics classes, fundamentals, basic concepts, and problem solving were reviewed. Students were also prepared for college entrance examinations and studied computer mathematics and logic. Several students participated in the Drexel MAP program and the AFNA legal and medical programs.

### West Philadelphia

A few students participated in the Temple University Master Music classes. Host visits were made by a writer/historian, a professor of history, and a jazz artist.

### ATTAINMENT OF OBJECTIVES

Objective 1: Twelfth-grade students in all Motivation sites will be accepted for admission at colleges and universities at a rate of 85% by June 1977.

This objective was considered attained. It was anticipated that the current rate of acceptances would continue through June, and that the stated criterion of 85% of Motivation seniors accepted for admissions to colleges and universities would be attained by June 30, 1977.

Of the 689 Motivation students in the 12th grade, 507 (74%) were accepted for admission to colleges and universities by June 1, 1977. (See Table 1.) This rate included Bok Vocational-Technical High School where only the cultural component of the program was provided.

If Bok was eliminated from the analysis, then of the 604 Motivation seniors, 477 (79%) were accepted for admission to colleges and universities by June 1.

Objective 2: Motivation students (11th and 12th grade) will have a higher daily attendance rate ( $p < .10$ ) as compared with the city-wide 11th and 12th grade attendance rate.

This objective was considered attained. However, the statistical significance ( $p < .10$ ) could not be determined because the intended  $t$  test was found to be technically inappropriate -- the school attendance data counts were not unduplicated.

The average daily attendance rates collected from school files revealed that Motivation students surpassed the city-wide attendance rates for October 1976, February 1977, and April 1977. The city-wide attendance rates included all students for each grade. (See Table 2.)

In the month of October 1976, 11th-grade Motivation students attended school daily at an average rate of 87%, while the city-wide attendance rate was 82%. Twelfth-grade Motivation students attended school daily at an average rate of 87%, while the city-wide attendance rate was 85%.

In the month of February 1977, 11th-grade Motivation students attended school daily at an average rate of 89%, while the city-wide attendance rate was 81%. Twelfth-grade Motivation students attended school daily at an average rate of 89%, while the city-wide attendance rate was 85%.

In the month of April 1977, which has hampered by a transportation strike, 11th-grade Motivation students attended school daily at an average rate of 81%, while the city-wide attendance rate was 75%. Twelfth-grade Motivation students attended school daily at an average rate of 81%, while the city-wide attendance rate was 79%.

Objective 3: Project pupils will develop their reading skills to the extent that 60% of them will maintain or increase their achievement levels as indicated by changes in their national percentile ranks on the California Achievement Test - 1970 - Total Reading Subtest from 1976 to 1977.

This objective was partially attained; 12th graders met the criterion, but 11th graders fell short.

A sample of 138 12th-grade and 168 11th-grade Motivation students was used to measure the attainment of this objective. Ninety-five (67%) of the 12th graders and 54 (32%) of the 11th graders developed their reading skills to the extent that they maintained or improved their national percentile ranks.

#### SUMMARY AND CONCLUSIONS

The Motivation project funded under Impact Aid-C prepared target area students for college and improved their basic skills.

The current evaluation was an investigation of the percentage of Motivation students accepted for admission to college, student attendance, and students' progress in reading.

The project's intended mode of operation was fully implemented. Although the project had the same goals at all schools, it was implemented differently at each site. At the most successful sites, the evaluator observed more involvement and enthusiasm displayed by students, parents, school administrators and project staff.

Two of the three objectives were considered attained, while one objective was considered partially attained. By June 1, 1977, Motivation students were accepted for admission to colleges and universities at a rate of 74%. Motivation students (11th and 12th grades) surpassed the city-wide attendance rates for the same grades. Of sampled 12th-grade Motivation students, 67% of them maintained or improved their Total Reading scores on the CAT.

TABLE 1

## COLLEGE ACCEPTANCES FOR MOTIVATION STUDENTS, JUNE 1, 1977

| Participating School | Motivation Seniors | Number Accepted | Percentage Accepted |
|----------------------|--------------------|-----------------|---------------------|
| Bartram              | 88                 | 66              | 75%                 |
| Bok                  | 85                 | 30              | 35                  |
| Edison               | 25                 | 19              | 76                  |
| Franklin, B.         | 22                 | 18              | 82                  |
| Gratz                | 69                 | 63              | 91                  |
| Kensington           | 35                 | 22              | 63                  |
| South Philadelphia   | 96                 | 53              | 55                  |
| Strawberry Mansion   | 56                 | 42              | 75                  |
| University City      | 55                 | 48              | 87                  |
| West Philadelphia    | 91                 | 85              | 93                  |
| William Penn         | 67                 | 61              | 91                  |
| TOTAL                | 689                | 507             | 74%                 |

TABLE 2

## AVERAGE DAILY ATTENDANCE RATES (%) FOR MOTIVATION STUDENTS

| Month                                 | Grade | City-wide | Motivation |
|---------------------------------------|-------|-----------|------------|
| October 1976                          | 11    | 82        | 87         |
|                                       | 12    | 85        | 87         |
| February 1977                         | 11    | 81        | 89         |
|                                       | 12    | 85        | 89         |
| April 1977<br>(Transportation Strike) | 11    | 75        | 81         |
|                                       | 12    | 79        | 81         |

## MULTIMEDIA CENTER

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

The Multimedia Center is a clearinghouse and service center providing teachers and students in Title I schools with curriculum-related audiovisual and other instructional materials.

### RATIONALE

Regular classroom instruction in Title I schools must be supplemented by meaningful sensory experiences. Research has shown that Title I children need instruction which appeals to their immediate concerns, utilizes concrete rather than abstract examples, and involves their direct participation.

The Multimedia Center meets the children's needs by providing teachers with various audiovisual and other instructional materials to be used in a multisensory approach to learning.

### EXPECTED OUTCOMES

The Multimedia Center is expected to provide Title-I-eligible students and teachers with materials meeting their specific curricular needs. In addition, the center will provide in-service training in the use and maintenance of audiovisual equipment.

### PREVIOUS FINDINGS

On surveys, participating school personnel have indicated highly favorable attitudes regarding the center's operation, and that the materials from the center were incorporated into the ongoing classroom activities. Usage was heaviest in the primary grades, and in reading and social studies.

### EVALUATION OF THE CURRENT YEAR

During the current year, evaluation of the Multimedia Center project focused on (a) the manner and extent to which teachers used the center's materials, and (b) the amount and impact of in-service training of paraprofessional aides and students.



## IMPLEMENTATION

During 1976-1977, the Multimedia Center project provided services to non-public schools in a manner consistent with the Title I Application.

The Multimedia Center catalog listed 1,818 different items for circulation among the participating schools. Typically the center had 3 to 5 copies of each item, with the exception of films, which were single copies. All audiovisual and other instructional materials could be borrowed for at least a week; some could be used by the same school for an entire semester. A contracted trucking service provided weekly pickup and delivery to the schools.

The project had 1,787 pieces of audiovisual equipment housed on a continuing basis in the participating schools. It provided maintenance service for that equipment and training of parent aides and students in its use.

The evaluation team visited 27 of the 48 schools, and informally observed the center for an average of one day per week. Implementation of the project's intended services was found to be appropriate and efficient.

## ATTAINMENT OF OBJECTIVES

Objective 1: During the current school year, the Multimedia Center will provide audiovisual and other instructional materials that are related to the curricular needs of educationally deprived pupils. It is expected that the teachers will use an average of 35 materials during the year, as measured by the Multimedia Center Survey.

This objective was partially attained. The specified types of materials were provided, but the average rate of use by teachers was lower than the stated expectation.

A summary of software items circulated to participating schools during the 1976-1977 school year is shown in Table 1. The total circulation of 6,222 represents an average of 130 items per school, with the heaviest concentration in the field of reading/language arts. These statistics, compiled by the center's staff as schools' requests were filled, do not reflect the sharing of materials which frequently occurred among teachers within the respective schools.

Data from individual teachers were elicited by the Multimedia Center Survey, which was sent in mid-March to all teachers at the 48 schools participating in the project. Of the 539 teachers, 402 (75%) responded to the survey; 365 answered the questions about the extent of their use of Multimedia Center materials. Their reports of actual use from September through March and of intended use from April through June are summarized in Table 2. The average teacher's reported use of 22.1 different items from the Multimedia Center during the school year fell short of the expected 35-item average, which may have been an unrealistically high goal.

Asked how well they thought the center was fulfilling the first sentence of this objective, 161 teachers (44% of the respondents) checked "extremely well," 179 (49%) "fairly well," 14 (4%) "just well enough to be considered adequate," 9 (less than 3%) "poorly or inadequately," and 1 (less than 1%) "not at all." The 10 teachers who responded negatively included only 4 who said they used the center's materials this year--one teaching in Grades 1-5, one in Grades 5 and 6, one above Grade 8, and one in special education.

Of the 298 teachers who indicated their major manner of using the center's materials, 155 (52%) checked "to reinforce or review subject matter already taught," 115 (39%) "to supplement or enrich classroom work," 14 (less than 5%) "to introduce subject matter," 12 (4%) "to provide content information," and 2 (less than 1%) "other."

Objective 2: During the school year, the coordinator of the Multimedia Center will provide paraprofessional aides with a minimum of 2½ hours of in-service training in the classroom use of audiovisual and other instructional materials. An activity log of the training will be maintained by the coordinator.

This objective was attained.

In September 1976 the coordinator invited principals to designate aides from their respective schools to receive training in the operation of audiovisual equipment and in ways of using the center's audiovisual materials in the classroom. Eighteen principals accepted the invitation. It was later agreed that two schools' aides did not need further training and that a third school would use its own experienced aides to conduct an internal training program. Aides from two other schools did not appear at the training session that was arranged for them. The coordinator's log indicated that between mid-January and mid-February, 19 aides from 13 project-participating schools received at least 3 hours of training at the Multimedia Center. (Two aides employed in another Title I project at a nonpublic high school also received training.)

The 19 aides from participating schools responded to the Multimedia Center In-Service Training Questionnaire. They all confirmed that their training included the operation and care of audiovisual equipment and teaching techniques for use with such equipment. By April 1, 17 of the aides had made use of their "operation" training, 12 had used their "care" training, and 10 had applied their "teaching techniques" training. Fifteen aides rated their training "excellent," 3 called it "good," and 1 (who worked specifically in her school's IPI mathematics program) rated it "fair."

Objective 3: During the school year, the coordinator of the Multimedia Center will provide sixth-grade students, selected by their schools for participation in Cadet Corps, with a minimum of 1½ hours of training in the use of audiovisual hardware. An activity log of the training will be maintained by the coordinator.

This objective was attained.

In September 1976 the coordinator invited principals to designate four sixth-grade students to be trained in the basic operation of audiovisual equipment in their schools. Thirty-four principals accepted the invitation. The coordinator's log indicated that between October 1 and December 14, small-group training sessions averaging approximately 2½ hours were given to 141 students in 34 schools. The trainees included 4 in fifth grade, 126 in sixth, 2 in seventh, 4 in eighth, and 5 in ninth grade.

Thirty-two of the principals whose students were trained this year responded to the Principal's Evaluation of Cadet Corps questionnaire. The principals indicated that trained Cadet Corps students were responsible for operating movie projectors at 32 schools, slide or filmstrip projectors at 31, overhead projectors at 20, reel-type tape recorders at 15, record players at 12, cassette players or recorders at 11, filmstrip previewers at 4, listening centers at 3, and other equipment at 12 schools. The trained students' performance with such audiovisual equipment was rated "excellent" by 10 principals, "good" by 18, and "average" by 4.

#### SUMMARY AND CONCLUSIONS

Fully implemented in harmony with the Title I Application, the Multimedia Center project has continued its programs of circulating audiovisual and other instructional materials appropriate for remediation of eligible students' educational deficiencies, providing and maintaining audiovisual hardware for classroom presentation of those materials, and training paraprofessional aides and students to operate such hardware.

The center filled 6,222 requests for its circulating materials during the school year. The average teacher reported using 22 different items (less than the possibly unrealistic goal of 35), primarily to supplement or reinforce ongoing classroom instruction, especially in reading/language arts. Of 365 teachers responding to an evaluative question on the Multimedia Center Survey, more than 93% indicated satisfaction with the project's services.

At least three hours of individual or small-group training in the operation, care, and appropriate use of audiovisual equipment and materials were given at the Multimedia Center to 19 aides designated by the respective principals of 13 participating schools. Fifteen of the aides gave their training the highest rating ("excellent") on a 5-point scale, and 17 reported that they had found their training useful in their work.

Small-group training sessions averaging approximately 2½ hours were given to 141 students designated by their respective principals at 34 participating schools. As in previous years, principals responding to a questionnaire expressed satisfaction with the performance of the trained students.

TABLE 1

## CIRCULATION OF MULTIMEDIA CENTER MATERIALS TO SCHOOLS

| Subject Area       | Total Items | Type of Materials |             |            |         |               |                |       |        |
|--------------------|-------------|-------------------|-------------|------------|---------|---------------|----------------|-------|--------|
|                    |             | Films             | Film-strips | Cas-settes | Records | Learning Kits | Transparencies | Games | Other* |
| Reading            | 2,828       | 769               | 721         | 523        | 122     | 251           | 151            | 100   | 191    |
| Soc.St./Guidance   | 1,594       | 894               | 319         | 47         | 158     | 92            | 31             | 0     | 53     |
| Science            | 710         | 505               | 118         | 2          | 5       | 20            | 17             | 0     | 45     |
| Mathematics        | 576         | 133               | 112         | 54         | 38      | 86            | 25             | 49    | 79     |
| Art or Music       | 373         | 146               | 42          | 0          | 133     | 36            | 9              | 0     | 7      |
| Phys./Health Ed.   | 136         | 115               | 7           | 0          | 0       | 0             | 0              | 0     | 14     |
| Foreign Language   | 5           | 4                 | 1           | 0          | 0       | 0             | 0              | 0     | 0      |
| Total              | 6,222       | 2,566             | 1,318       | 626        | 458     | 485           | 233            | 149   | 389    |
| Percentage of Uses | 100%        | 41%               | 21%         | 10%        | 7%      | 8%            | 4%             | 3%    | 6%     |

\*Includes pictures, reel-to-reel tapes, books, and manipulative devices.



TABLE 2

USE OF MULTIMEDIA CENTER MATERIALS: SUMMARY OF  
UNDULICATED COUNTS REPORTED BY 365 TEACHERS\*

| Datum               | September<br>through<br>December | January<br>through<br>March | April<br>through<br>June | Year  |
|---------------------|----------------------------------|-----------------------------|--------------------------|-------|
| Items Reported      | 3,130                            | 2,417                       | 2,535                    | 8,082 |
| Items per Teacher   | 8.6                              | 6.6                         | 6.9                      | 22.1  |
| Teachers Using None | 109                              | 107                         | 85                       | 55    |

\*Of the 402 respondents to the Multimedia Center Survey, 37  
either omitted this question or gave ambiguous responses to it.

## SCHOOL-COMMUNITY COORDINATOR

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

The project employs community residents as school-community coordinators to work with parents, students, and school personnel in transmitting information, facilitating mutual understanding, and encouraging participation between the school and the community.

### RATIONALE

This project attempts to increase communication between Title-I-eligible students, their parents or guardians, and the personnel in schools who serve them. Through in-school student conferences, parent conferences arranged for school staff members, and visitations to students' homes by the SCC, school problems that affect individual children's academic standing and school morale can be obviated. Many problems pertaining to students' health, discipline, attendance, or basic skills can be resolved through the coordinator's personal contacts with the home.

### EXPECTED OUTCOMES

It is expected that the school-community coordinator will facilitate improved communication and understanding between the school, the parents, and the community, as well as increased participation by school personnel and parents in school-community activities. But especially, an increased emphasis on service to children will allow response to many students' problems which might otherwise go unnoticed.

### PREVIOUS FINDINGS

Previous SCC evaluations indicated that community residents who were visited by the coordinators were more knowledgeable about the school and participated in more school activities than those community residents who did not receive visits.

In 1973-1974, school personnel, community leaders, and organization members expressed the feeling that both the SCCs and the area coordinators performed well as liaisons between the home, school, and community.

In 1974-1975, the SCC acted as the major communication link and interpreter between the school and the home. SCCs made home visits, conducted cluster meetings for parents, attended community meetings, developed written communica-

tions, and made presentations at faculty meetings, in accordance with the project's stated objectives. Area coordinators continued to fulfill their role.

In 1975-1976, the SCCs concentrated their services on Title-I-eligible students and their parents or guardians. SCCs worked directly with individual children and their needs through in-school student contacts and out-of-school conferences. An average of 73.2 out-of-school conferences instead of 75 were held by the SCCs. Community meetings were attended and cluster meetings were sponsored in accordance with the project's stated objectives.

Area coordinators provided the assistance necessary for the SCCs to follow new procedures and continued to serve as a key communication link between the neighborhood schools, the parents, the community, and local organizations.

#### EVALUATION OF THE CURRENT YEAR

The current year's evaluation of the School-Community Coordinator project focused on (a) the specific duties of the SCC and (b) the extent to which the SCCs achieved the specified behavioral standards. The team conducted the evaluation through on-site case studies, interviews with SCCs, and the collection of data from surveys and monthly reports submitted by SCCs.

#### IMPLEMENTATION

In 1976-1977, the project's intended mode of operation was fully implemented.

The evaluation team conducted half-day case studies of the activities of 25 coordinators in 24 schools. These case studies helped cross-validate reports submitted by the SCCs. Their monthly reports (which detailed the out-of-school conferences, in-school pupil services, and cluster meetings held by SCCs) were collected by the evaluation team and summarized.

SCCs were observed concentrating their efforts on the problems and direct needs of individual Title-I-eligible children through in-school contacts and referrals made by members of the school staff. These reports were filed by the SCCs after follow-up services to Title-I-eligible pupils which focused primarily on attendance, basic skills and work habits, behavior, health, and other concerns of the Title-I-eligible children.

SCCs visited the parents or guardians of Title-I-eligible pupils in their homes to inform them about school programs and services, furnish ideas for reinforcement of their children's basic skills, and disseminate community information directly related to family needs and problems. In addition to arranging conferences for parents with the principal and school staff, SCCs encouraged parents to participate in school activities. Most SCCs took steps to involve the parents of Title-I-eligible pupils in the Parent Partnership Work-

shops. As a result of these project efforts, parents became more cognizant of the methods and procedures to be used in assisting their children with the learning process. Furthermore, an increased understanding of the school's educational program was promulgated through the citywide parent involvement in the Parent Partnership Workshops.

At least one school-community coordinator was assigned to each of 150 participating elementary and secondary schools. A bilingual SCC was assigned to 13 of the schools with a large population of Spanish surnamed children. They often functioned as interpreters for principals, staff, and parents.

The 12 area coordinators (AC) were assigned to assist, inform, and advise an average of 13 SCCs. During on-site visits, AVs were observed coordinating the work of the SCCs and acting as a liaison between the home, school, and community. Visits were made to each SCC assigned at least once a month. ACs also disseminated timely information to the parents and the community at meetings they attended.

Two supervisors (professionally trained in guidance and social work) met with area coordinators on an ongoing basis. They also provided staff development for the SCCs. The acting project administrator continued his role as supervisor since the project director was on a sabbatical leave for the school year.

#### ATTAINMENT OF OBJECTIVES

Objective 1: Eighty percent of the school-community coordinators will complete an average of 3.5 out-of-school conferences, seven for two days, including home visits for each day of service they provide each month to participating ESEA, Title I pupils in the areas of attendance, basic skills and work habits, behavior, health and the general well-being of these students. These conferences will emanate from school or self-initiated referrals. This will be verified by inspection of monthly reports and pupil referral forms maintained by the school-community coordinators.

This objective was not attained.

For the three sample months of October, November, and March, the evaluators tabulated and averaged data from the monthly reports which summarized the SCCs' daily activities. In order to collect the data before the Easter vacation, the project director requested that the March monthly reports include March 1 to March 25.

During October and November, 77% and 78% of the SCCs averaged 4 out-of-school conferences per working day. Sixty-five percent attained the objective in March with an average of 3.9 out-of-school conferences per working day.



The number of monthly reports received from all 160 SCCs during the three sample months was highest in March when 156 submitted reports. However, it was impossible for the four remaining SCCs to submit reports because they were on extended sick leave. Data concerning the number of reports submitted and the completion of out-of-school conferences are summarized in Table 1.

SCCs attaining the objective during the three sample months (19 working days each) averaged 1.4 days of absence during each month. SCCs with lower performance for each day of service, ranged from .9 days to 1.3 days of absence.

Monthly reports examined during the three sample months indicated that coordinators received most requests for service related to pupils' needs for their general well-being. This area included requests for tutoring, employment, food, housing, clothing, money, membership in clubs such as the Boy Scouts, aiding and comforting a family experiencing a tragedy, and completing free lunch applications. Behavior ranked second in the requests for service during all three months. Attendance, which included absence, lateness, and cutting, ranked third in October; basic skills and work habits held third position in November; and health in March.

Objective 2: . Ninety percent of the school-community coordinators will provide in-school services to a minimum of 20 participating ESEA, Title I pupils each month relative to their needs or problems. This will be verified by inspection of monthly reports maintained by the school-community coordinators.

This objective was not attained.

Information was gathered from the data of three sample months used for Objective 1.

The number of in-school pupil services increased during the year. In October 70% of the coordinators attained the objective, 71% in November, and 77% in March. Data concerning in-school services to pupils are summarized in Table 2.

SCCs providing 20 or more in-school services for pupils averaged 39 during October and March, and 38 during November.

Objective 3: Ninety percent of the school-community coordinators will provide ten cluster meetings of parents of ESEA, Title I children each year related to topics of concern of needs of the children.

This objective was not attained.

A School-Community Coordinator Cluster Meeting Survey was conducted in March by the evaluation team. Data from 149 respondents were tabulated and averaged. Seventy-six percent (121) held 13.3 parents' cluster meetings.

The acting project director indicated that Parent Partnership Workshops were to be counted as parents' cluster meetings when the SCC arranged for a group of the school's parents to accompany her. One hundred twenty-eight of the 149 respondents (86%) reported planning Parent Partnership Workshops as cluster meetings.

#### SUMMARY AND CONCLUSIONS

The SCCs concentrated their services on Title-I-eligible pupils and their parents or guardians. They devoted primary attention to attendance, basic skills and work habits, behavior, health, and the general well-being of these pupils. SCCs informed and involved the parents of Title-I-eligible pupils in the Parent Partnership Workshops. Through their participation, parents were able to increase their understanding of the school's program and received information about helping their children with the learning process.

The current year's evaluation used on-site case studies and data collected from monthly reports of SCCs, a School-Community Coordinator Cluster Meeting Survey, and observations. The project's intended mode of operation was fully implemented.

The three project objectives were not attained. During three sample months 77%, 76%, and 65% of the SCCs (instead of the expected 80%) held at least 3.5 out-of-school conferences per working day. Although 90% of the coordinators did not hold a minimum of 20 in-school contacts with pupils, SCCs attaining the objective provided at least 38 in-school contacts with Title-I-eligible pupils during three sample months. Seventy-six percent of the SCCs (instead of 90%) averaged 13.3 parents' cluster meetings over the school year -- 3.3 more than the expected ten.

Area coordinators (AC) visited their assigned SCCs at least once a month and assisted them by providing information, answering questions, and checking records. Both ACs and SCCs served as key communication links between neighborhood schools, parents, the community, and local organizations.

The acting project administrator continued his role as supervisor.

TABLE 1  
COMPLETION OF OUT-OF-SCHOOL CONFERENCES  
BY SCCs DURING THREE SAMPLE MONTHS (19 DAYS)

| Out-of-School Conferences<br>Conducted     | October |      | November |      | March <sup>1</sup> |      |
|--------------------------------------------|---------|------|----------|------|--------------------|------|
|                                            | N       | %    | N        | %    | N                  | %    |
| Completed 3.5 or more<br>per working day   | 123     | 77   | 121      | 76   | 104                | 5    |
| Completed less than 3.5<br>per working day | 22      | 14   | 26       | 16   | 52                 | 33   |
| No information submitted <sup>2</sup>      | 15      | 9    | 13       | 8    | 4                  | 2    |
| Total                                      | 160     | 100% | 160      | 100% | 160                | 100% |

<sup>1</sup>Reports from March 1-25 were tabulated.

<sup>2</sup>SCCs had extended illnesses or other extenuating circumstances.

TABLE 2

SCC IN-SCHOOL SERVICES TO PUPILS  
DURING THREE SAMPLE MONTHS (19 DAYS)

| Number of In-School<br>Services Provided | October |      | November |      | March <sup>1</sup> |      |
|------------------------------------------|---------|------|----------|------|--------------------|------|
|                                          | N       | %    | N        | %    | N                  | %    |
| 20 or more                               | 112     | 70   | 113      | 71   | 123                | 77   |
| Less than 20                             | 24      | 15   | 26       | 16   | 33                 | 21   |
| No listed information                    | 24      | 15   | 21       | 13   | 4                  | 2    |
| Total                                    | 160     | 100% | 160      | 100% | 160                | 100% |

<sup>1</sup>Reports from March 1-25 were tabulated.



## SUMMER SPECIAL EDUCATION

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

The Summer Special Education project provides instruction and therapy services for emotionally disturbed, visually handicapped, retarded trainable, hearing-handicapped, and orthopedically handicapped students, and job-coordinator service for retarded educable students.

### RATIONALE

The Summer Special Education project extends the instructional and therapeutic services offered during the regular school year. Continuity and consistency throughout the year are necessary to meet the needs of the students retarded trainable children need constant reinforcement for the maintenance of acquired training and vocational skills; hearing-handicapped students have concomitant language handicaps which must be systematically met throughout the year in order to avoid regression of communication skills; orthopedically handicapped students need to maintain their prescriptive therapy programs on a full-time basis; and employed retarded educable students need the continuous support and services provided by the job coordinator in making the personal and social adjustments necessary for successful year-round employment.

Many of the participating students have a limited background of experiences. The Summer Special Education project provides an opportunity for them to participate in field trips and other enrichment activities not included in their regular school programs.

### EXPECTED OUTCOMES

It is expected that the reinforcement and enrichment experiences which the summer project provides will increase the scope of the regular school-year curriculum and reduce the summer regression that would otherwise occur.

### PREVIOUS FINDINGS

Descriptive evaluations by the project director, classroom observations, and teacher reports based on individual checklists for students indicated that school services available during the regular year were also provided in the summer project, and that some enrichment activities also were provided.

All instructional programs attained their stated objectives for students to maintain or improve their skills. Progress reports indicated that at least 97% of the students in the project's instructional programs improved or maintained their levels in academic, social, and vocational skills, and in physiological therapy. In the average summer, 180 students were placed in work situations by the project.

Average daily attendance for the Summer Special Education programs ranged between 79% and 94%.

#### EVALUATION OF THE CURRENT YEAR

The current evaluation of the Summer Special Education program examined the activities of the job coordinator and assessed both the project's services and the students' progress.

#### IMPLEMENTATION

In 1976-1977, the project's intended mode of operation was partially implemented. This position of project job coordinator was not funded. Two hundred and ninety-six students were enrolled in summer instructional programs for the orthopedically handicapped (OH) and trainable mentally retarded (TMR). This summer instructional program involved four participating centers; Widener for the orthopedically handicapped, Bartlett, Brooks, and Muhr for the trainable mentally retarded. The enrollment for Widener was 195 students, while Bartlett had 17, Brooks had 37, and Muhr had 47.

The Widener program for the OH student was academically oriented. It stressed reading and math and included enrichment activities. The TMR program involved the students in shop opportunities, primarily, assembly and packaging.

#### ATTAINMENT OF OBJECTIVES

Objective 1: Summer regression of special education students in the project will be controlled to the extent that in each of two areas (academic skills and social skills) 80% of students will maintain their acquired levels of development, as indicated by teachers' end-of-project ratings of students' progress.

This objective was attained.

Teachers used the evaluator-developed individual student report forms, specific to each program, for the assessment of academic and social skills. Teachers indicated whether the student improved, showed no change, or regressed in achievement level for each applicable skill. Because instruction was individualized, every student was not necessarily rated in all skill areas.

OH student progress ratings in academic and social skills are summarized in Table 1. Of the 136 orthopedically handicapped students rated in social skills, 11% improved and 89% maintained their levels. Of the 52 OH students rated academically, 7% improved and 92% maintained their levels. This was more than the expected 80%.

Teacher ratings of the retarded educable students (Bartlett, Brooks, and Muhr) indicated that the majority (97%) of the students either improved or maintained their respective levels in all shop-related areas. (Ratings are summarized in Table 2.) Of the 65 TMR students rated in social skills, 8% improved and 91% maintained their levels. This was more than the expected 80%.

Objective 2: Supportive services will be given to special education students in the project to the extent that at least two-thirds of the Orthopedically Handicapped students in the project will receive physical therapy and/or occupational therapy.

This objective was attained.

The evaluator's inspection of teachers' records indicated that 142 (73%) of the 195 orthopedically handicapped students in the project received physical therapy and/or occupational therapy. This 73% is more than the expected two-thirds. In addition, some OH pupils also received other types of therapy: 36 (25%) students received speech therapy, 11 (8%) students received swimming therapy, and 2 (1%) students received functional therapy.

#### SUMMARY AND CONCLUSIONS

The Summer Special Education project extended the instructional and therapeutic services offered to exceptional students during the regular school year.

The current year's evaluation focused on the implementation of project services and students' progress.

The project's intended mode of operation was partially implemented. The student progress reports indicated that all of the instructional and therapeutic programs were successful in maintaining and/or improving the students' achievement levels in academic, social, and vocational skills, and in providing physiological therapy. The inclusion of enrichment activities in the program for the orthopedically handicapped provided additional benefits for the participating students. The position of project job coordinator for TMR pupils was not functional this year due to lack of funding; therefore, job-related supportive services were not provided for TMR pupils during the summer.

## SUMMER COMPONENTS OF TITLE I ESEA PROJECTS

Evaluations of the summer components of Title I projects are reported consecutively in the following order:

Affective Education  
Benchmark  
Bilingual Education  
Comprehensive Mathematics Project - A  
Comprehensive Reading Project:  
    District 1 Reading  
    District 2 Reading  
    District 3 Reading  
    District 4 Reading  
    District 5 Reading  
Computer Managed Instruction  
Institutions for Neglected and Delinquent Children  
Learning Centers  
Motivation  
Multimedia Center  
School Community Coordinator

Information regarding these summer components is presented substantially as the respective project administrators and/or district research associates responded to a six-item Summer Evaluation Summary form distributed to them by the Department of Federal Evaluation Resource Services:

1. Name of Project \_\_\_\_\_
2. List the goals of the summer component of your project. \_\_\_\_\_
3. Describe the activities employed to attain these goals.
4. List which goals were attained and cite evidence to support your belief.
5. Describe the goals that were not attained and the reason why.
6. List programmatic changes and recommendations that will aid in the attainment of goals in future years.



AFFECTIVE EDUCATION  
(Summer Component)

GOALS SET:

1. To prepare training designs and training materials for use in connection with workshops to be led for teachers, aides, parents and administrators.
2. To develop and refine methods and delivery systems for use in long term staff development work such as Communications Network, Schools For All Ages, and Parenting.
3. To finalize staff development meeting times and new commitments with district superintendents and principals.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

1. Staff prepared new designs, revised old designs, and brought together material for use with these designs.
2. Meetings were held to plan delivery system for Affective Education Program long term groups. Schedules were outlined and appropriate people contacted.

GOALS ATTAINED:

1. Goal #1 was fully attained. Designs on file, materials prepared and duplicated.
2. Goal #2 was completed to the best of our ability, given the unusual circumstances of so many people not being available due to the budget problem.
3. Goal #3 was attained to the extent possible given all the uncertainties of staffing problems for the new school year. Some decisions are being held until September when a more accurate indication will be possible of who will be where.

GOALS NOT ATTAINED:

See above. Main problem was uncertainty and people not being available due to budget problem. Also, we operated without a secretary.

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

1. Necessary to have secretary all summer.
2. Important to have funds to hire people for one month in summer so that leadership of Schools For All Ages program will be carried out.

BENCHMARK  
(Summer Component)

GOALS SET:

1. To review the 1976-1977 achievement based upon observations, data collected and reports by Field Coordinators.
2. To plan for the 1977-1978 program. (Significant changes in personnel and program format were necessary.)

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

1. Meetings with Field Coordinators
2. Review of data with research associate
3. Meetings with University personnel
4. Consulted with Office of Federal Program and Personnel Division

GOALS ATTAINED:

All of the goals were attained.

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

A summer staff development activity for all personnel in the Benchmark Program would assist in providing a more efficient method of attaining instructional improvement. Summer activities would not disrupt the normal school program. This is especially true if changes in the program structure are necessary.

BILINGUAL EDUCATION  
(Summer Component)

GOALS SET:

To plan the effective implementation of the project's activities for the 1977-78 scholastic year. Areas of concern included: Evaluation, Curriculum Planning and Revision, Assemblies and In-Service Programs, Creation and/or Adaptation of Informal Reading Inventories in English and Spanish, Reorganization of instructional and supplementary materials, updating of student records, screening of Hispanic students newly enrolled in the feeder schools, and a follow-up survey of students screened out of the program and those mainstreamed after receiving service.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

Consultation with: Evaluators from the Office of Research of the School District of Philadelphia, the Assistant Superintendent of Schools and the Director of the Spanish-Speaking Apostolate Office of the Archdiocese of Philadelphia, principals and pastors of feeder schools. Review of available bilingual materials and of available resources for staff development. Review of materials and of available resources for staff development. Review of curriculum guidelines issued by the Curriculum Office of the Archdiocese of Philadelphia and of the School District of Philadelphia.

GOALS ATTAINED:

All of the goals cited above were attained to some degree. The evaluation design has been included in the 1977-1978 proposal; Informal Reading Inventories are duplicated and ready for use in September; Language Arts guidelines have been adapted for use in September; Updated copies of student records have been prepared for distribution to Feeder Schools; Materials have been categorized and organized; A Calendar of events has been drafted for September distribution.

GOALS NOT ATTAINED:

In-service Programs--pending confirmation by chairpersons.  
Follow-up Survey--unavailability of Feeder School personnel during summer vacation.  
Screening process is on-going; therefore, it is considered incomplete.

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

A serious study of the results of the Follow-up Survey is recommended in order to determine the effectiveness of the Screening and Mainstreaming procedures used in the program.



COMPREHENSIVE MATH PROJECT - A  
(Summer Component)

GOALS SET:

1. To provide appropriate staff development for teachers in program.
2. To collect and analyze scores on Math Levels & CAT Tests to determine effectiveness of the program.
3. To produce data sheets summarizing instructional levels growth - 1976-77.
4. Requisition instructional materials for use in 1977-78 school year.
5. Plan staff development programs for 1977-78 for EMRTs and aides.
6. Balance expenditures for 1976-77 school year.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

1. A voluntary two week staff development program was held from June 27 to July 8, 1977 at E. Washington Rhodes Middle School.
2. Test scores on Math Levels and CAT Tests were analyzed.
3. Levels growth data sheets are currently being summarized.
4. Staff development programs for 1977-78 have been tentatively planned.
5. All fiscal reports for 1977-78 have been reviewed and adjusted.

GOALS ATTAINED:

All goals have been attained or will be attained in the near future:

1. Staff development program completed.
2. All test scores analyzed.
3. All fiscal data sheets reviewed and balanced.
4. Staff development programs for 1977-78 tentatively planned.
5. Levels growth data sheets being summarized now.

GOALS NOT ATTAINED:

No instructional materials for 1977-78 were requisitioned because no allocations were made for this purpose.

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

None.

DISTRICT 1 READING  
(A Summer Component of the COMPREHENSIVE READING PROJECT)

GOALS SET:

1. To summarize Phonics Inventory Data by grade and school.
2. To summarize CAT data by school for District Superintendent.
3. To summarize Intermial Reading Inventory results by school.
4. To complete Non-Technical Report.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

1. Collect all phonics data, compute averages by subtest, compute mastery by subtest. Place on individual school report sheets.
2. Create school reporting sheets. Enter data by grade for Total Math and Total Reading.
3. Collect all IRI data, compute averages and enter on school reporting sheets.
4. Use data from Phonics and CAT to evaluate objectives for Non-Technical Report.

GOALS ATTAINED:

1. Report to District Superintendent.
2. Report to District Superintendent.
3. Report to Assistant Director, ORE, POES.

GOALS NOT ATTAINED:

None.

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

None.

DISTRICT 2 READING  
(A Summer Component of the COMPREHENSIVE READING PROJECT)

GOALS SET:

1. To complete evaluation of the 1976-1977 year's effort.
2. To plan for services to be provided in 1977-1978.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

1. Non-Technical Report was completed.
2. School and District data was displayed in Graphic Form.
3. School Characteristics data and Reading Resources data were completed.
4. Informal Reading Instruments were studied further.
5. S.R.A. Manual was written.

GOALS ATTAINED:

All of the activities under "3" above were directed toward the first objective.

GOALS NOT ATTAINED:

The planning goal was not achieved due to the unknown level of personnel resources for the coming year.

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

Continue the use of objectives and instruments aimed at diagnostic and placement services.

DISTRICT 3 READING  
(A Summer Component of the COMPREHENSIVE READING PROJECT)

GOALS SET:

1. To complete the evaluation of the 1976-1977 year's effort.
2. To plan for services to be provided in 1977-1978.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

1. Non-Technical Report was completed.
2. School and District data was displayed in Graphic Form.
3. Standardized Test Data and District Evaluation Results were reported to the District Superintendent and principals.

GOALS ATTAINED:

The evaluation was completed as evidenced by the completed Non-Technical Report.

GOALS NOT ATTAINED:

The planning objective could not be carried out due to a lack of administrative and supervisory personnel and uncertain resources for the coming year.

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

Continue diagnostically oriented testing services and staff development sessions which help the reading teachers to utilize the data provided.



DISTRICT 4 READING  
(A Summer Component of the COMPREHENSIVE READING PROJECT)

GOALS SET:

1. To summarize Phonics Inventory data by grade and school.
2. To summarize CAT data by school for District Superintendent.
3. To complete Non-Technical Report.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

1. Collect all phonics data, compute averages by subtest, compute mastery by subtest. Place on individual school reporting sheets.
2. Create school reporting sheets. Enter data by grade for Total Math and Total Reading.
3. Use data from Phonics and CAT to evaluate objectives for Non-Technical Report.

GOALS ATTAINED:

1. Report to District Superintendent.
2. Report to District Superintendent.
3. Report to Assistant Director, ORE, POES.

GOALS NOT ATTAINED:

None

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

None

DISTRICT 5 READING  
(A Summer Component of the COMPREHENSIVE READING PROJECT)

GOALS SET:

1. Complete the Reading Program Evaluation
2. Produce Ancillary Reports - rankings, summaries, etc. - based on CAT information
3. Summarize Lippincott information as to Checkpoint
4. Review and comment on relevant Early Childhood activities

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

1. Gather pertinent information and present it in readable form
2. Expand upon key points considered in this information and develop it in line with the objectives of the program
3. Collect and summarize school basal information on student progress
4. Make recommendations on the District's Early Childhood Program.  
Review assessment instruments and comment on them.

GOALS ATTAINED:

1. The Report was produced
2. Ancillary Reports were produced
3. Summary Reports were produced
4. Activities were reviewed

GOALS NOT ATTAINED:

Not Applicable

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

Not applicable

COMPUTER-MANAGED INSTRUCTION  
(Summer Component)

GOALS SET:

1. Revision of instructional materials to adapt them to program strategies and techniques.
2. To develop and/or select additional off-line instructional materials and continue identification, classification, and codification of existing materials for integration into total system.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

The success of this program depends on the execution of a "built-in" continuous evaluation-revision-development process. Through this process segments of the program which are not meeting criteria of performance established by the staff are identified and suitable revisions or substitutions are made.

GOALS ATTAINED:

1. Substantial amount of material was revised or added to off-line resources.
2. Program revisions which should strengthen the program were accomplished.

GOALS NOT ATTAINED:

None

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

Changes are aimed at making the program more operational than developmental. This should allow program to be available to a greater number of eligible students.

INSTITUTIONS FOR NEGLECTED AND DELINQUENT CHILDREN:  
ASSOCIATION FOR JEWISH CHILDREN  
(Summer Component)

GOALS SET:

Pupils will demonstrate improvement as measured by performance (grade level) on achievement tests.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

Children in program received tutoring in basic skills - reading and math.

GOALS ATTAINED:

Children who participated fully in the program did demonstrate improvement in basic skills as evidenced by post-test scores on standardized achievement tests.

GOALS NOT ATTAINED:

These children who did not participate fully in the program did not achieve as much as had been expected.

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

1. Possibly rescheduling program to other times of the day or evening for some children who then might be able to participate more fully.
2. For some children, the possibility of moderately long-range assignments to allow some carry-over if program has to be interrupted briefly.



INSTITUTIONS FOR NEGLECTED AND DELINQUENT CHILDREN:  
BAPTIST CHILDREN'S HOME  
(Summer Component)

GOALS SET:

To have Title I eligible students, who have received instruction during the winter term, to remain at the level that they attained in the winter term and not regress over the summer.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

Identified children were provided with instruction for a minimum of four hours for a week per child for seven weeks. Field trips to children's theatre at Playhouse in the Park and Valley Forge Music Fair. Children were awarded points for attendance and achievement and eligible children were rewarded with a trip to "Great Adventure".

GOALS ATTAINED:

Children involved in the program tended to remain at the levels of achievement attained during the winter and the point system generated excitement by the children and staff. The test data supported the belief that the children did not regress over the summer.

GOALS NOT ATTAINED:

None

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

None

INSTITUTIONS FOR NEGLECTED AND DELINQUENT CHILDREN:  
CATHOLIC HOME FOR GIRLS  
(Summer Component)

GOALS SET:

1. Reinforcement and Teaching Basic Skills in Addition, Subtraction, Multiplication and Division.
2. Application to Computation and Problem Solving using whole numbers, fractions, decimals, percents, algebra, and geometry.
3. Individualized instruction to effect grade level requirements according to diagnosis found in California Achievement Test battery.
4. Increase interest in learning.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

1. Diagnostic testing at all levels.
2. Individualized instruction according to needs. (1 to 1 or 2 to 1 pupil-teacher ratio).
3. Games and devices for drill to strengthen skills.
4. Continuous Progress kits (Elementary and Secondary).
5. Imperial Tape program (Elementary and Secondary).
6. Evaluation tests at each level to ascertain progress.
7. Remedial help when needed.
8. Success oriented projects.
9. Pre and Post tests to evaluate progress.

GOALS ATTAINED:

1. Gains in grade levels (1 year) (60% of group).
2. Motivation toward learning increased.

3. Self image raised through achievement of success.
4. Interaction and counseling activated.
5. Speed and accuracy stepped up.
6. Pre and Post tests administered throughout.

GOALS NOT ATTAINED:

Some students had low attention span due to psychological circumstances of their lives. Their performance in the program was bolstered by extra-curricular activities such as art, music and cultural trips on the side.

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

1. More cultural trips and activities will be planned on an extra curricular basis.
2. Pre and Post testings will accompany each student's class work.
3. Diagnostic and Evaluative tests will be administered before and after the duration of the program to allow more instructional time.

INSTITUTIONS FOR NEGLECTED AND DELINQUENT CHILDREN:  
GIRARD COLLEGE SUMMER SCHOOL  
(Summer Component)

GOALS SET:

1. To remedy the scholastic failures from the winter.
2. Work to remove the specific weaknesses that caused placement in summer school.
3. Work on boys' study habits.
4. Attempt to insure future success in school.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

Remedial Language Arts, Remedial Mathematics with supportive Arts & Crafts, individual attention given to each boy, low pupil-teacher ratio. One hour of study was provided for each hour of classroom instruction in addition to a study period of one hour every evening. Close supervision of the study halls by teaching staff also.

GOALS ATTAINED:

We believe the program was successful because there were only about a half dozen failures among the large group of pupils who attended summer school. The Wide Range Achievement Test results support the claim for improvement. The reading and spelling showed gratifying gains. All of the boys took the WRAT at the beginning and the end of summer school. Pre and post test results are available.

GOALS NOT ATTAINED:

Some boys did not progress satisfactorily in math; computational skills need to be stressed more. We are attempting to create a scope and sequence for each area that was taught this summer; English, reading, and mathematics. This will mean working with the winter Director of Education and both the staffs of the winter and summer schools before the beginning of next year's summer school.

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

There was not enough classroom supervision of the staff by the administrator of summer school. As the administrator has worked and is certified in both the elementary and secondary fields, we believe it will be possible to create a stronger program in the years to come.



INSTITUTION FOR NEGLECTED AND DELINQUENT CHILDREN:  
GUARDIAN ANGEL HOME  
(Summer Component)

GOALS SET:

1. Increase the girls reading and math skills.
2. Increase social and environmental awareness through supportive educational activities and trips.
3. Give the girls experience in reading apartment leases, the Pennsylvania Driver's Manual and other items which they will need to know about when they move out of the Home and live on their own.
4. Give the girls experience in handling a savings and checking account, and other financial materials.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

1. Reading and math classes were held throughout the month of July on Monday, Tuesday and Thursday evenings. Classes were two hours long and time was divided equally between reading and math. All classes were conducted by reading and math specialists.
2. Trips have been and will continue to be conducted throughout the summer to places of educational and historical interest. The girls have visited several museums, The Living History Center and a trip to the Franklin Institute.

GOALS ATTAINED:

1. The girls have made at least some progress in developing their reading and math skills. Individual evaluations completed by the teacher will delineate the specific progress which each girl achieved; these forms will be forwarded to the Office of Federal Programs at the end of the summer.
2. As noted above, numerous trips have already been conducted and others are planned.

GOALS NOT ATTAINED:

1. The girls received only limited experience with reading apartment leases, and in looking for apartments for themselves in the newspapers. The reading specialist felt the girls needed more help with their basic reading skills, such as comprehension and so she did not use all of the material which had been set forth in the program guidelines.

2. Because of the limited math skills of the girls, the math specialist also was unable to cover all of the material described in the summer program.

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

1. It may be helpful next year to have the reading and math classes for five weeks instead of four so that the teachers have more time to cover the material in the program. This would also afford them additional time to individualize with the girls.

2. It is our recommendation that the Title I office consider permitting at least one out-of-state trip during the summer programs. Planning educational trips has become increasingly more difficult each year because there are only a limited number of places which can be visited in Pennsylvania.

INSTITUTIONS FOR NEGLECTED AND DELINQUENT CHILDREN:  
NORTHERN HOME FOR CHILDREN  
(Summer Component)

GOALS SET:

1. To improve basic skills in reading and math.
2. To improve vocabularies.
3. To improve conceptualization in reading and math.
4. To improve attitudes toward school.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

Two reading and two math classes enabled us to reduce the teacher-pupil ratios to a highly therapeutic level of teaching. In some cases this resulted in a one-to-one situation wherein the most needy of our pupils were helped. Short-term immediate gratification projects were initiated in order to hold interests of those pupils with short interest spans. Prizes were awarded for those having made the most progress each week.

GOALS ATTAINED:

We made some progress with most pupils in all goal areas. In dealing with hard-core school problems as we are, it is a forgone conclusion that a few pupils will not respond or will respond only to a very limited degree.

We feel that we received good response and progress with 90% of our pupils.

GOALS NOT ATTAINED:

The 10% of the pupils who failed to respond represented our most severe emotionally disturbed pupils. The social interaction of these pupils was highly negativistic and very difficult to deal with.

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

In the future we will plan classes for the most difficult pupils on a one-to-one basis. Our experience this summer has convinced us that any effort short of this will not be productive with some pupils.

INSTITUTIONS FOR NEGLECTED AND DELINQUENT CHILDREN:  
ST. JOSPEH'S HALL FOR GIRLS  
(Summer Component)

GOALS SET:

1. To maintain or improve the student's Reading and Math levels.
2. To incorporate the areas of reading and math into life situations.
3. To improve the students appreciation of the fine arts.
4. To increase the students' awareness of the importance of the two academic areas.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

1. Classroom instruction in the reading and math areas.
2. Small group instruction and at times one-to-one instruction.
3. Daily classes instructing the students in multi-areas associated with the fine arts.
4. Field trips where the students would implement aspects taught in summer school.

GOALS ATTAINED:

1. 90% or better of the summer school students maintained or improved their status in both reading and math areas.
2. The field trips successfully enabled the students to apply their knowledge in a practical manner.
3. The summer school component maintained the students' interest in the academic areas of math and reading and the areas of music, dance and instrumentation.

GOALS NOT ATTAINED:

The goals that were set forth for the summer school component were met in full.



CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

Continue a summer school component that incorporates both academic studies as well as field trips coupled with fine arts studies to enhance the studies. Experiences are more meaningful when related to situations that have been encountered.

INSTITUTIONS FOR NEGLECTED AND DELINQUENT CHILDREN:  
ST. VINCENT'S ORPHANAGE  
(Summer Component)

GOALS SET:

1. Teach or strengthen basic skills in math and reading.
2. Stimulate muscular development and emotional development.
3. Develop self-confidence as well as social and cultural awareness.
4. Stimulate readiness for formal instruction for pre-schoolers.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

1. Provided individual attention and very small group instructions.
2. Used materials of high interest and low reading level.
3. Used care teaching techniques in teaching library skills - prescriptive teaching techniques were also used.
4. Provided opportunities outside classroom situations in form of nature trips (Pocono.Mts.), cultural trips (Playhouse in the Park), social events (trips to historic sites in Phila.), dancing, knowledge of and use of money.)

GOALS ATTAINED:

The enthusiasm was evident of the desire for self-improvement. Library cards from the public library were obtained for 85% of the student population by request. A program of song and dance, arts and crafts was given at end of program. Significant growth was seen on Form B of Post test for 90% of children. 75% of the children who were in the Readiness Program show that they should do well or very well in a first grade program.

GOALS NOT ATTAINED:

All of our anticipated goals were obtained.

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

My recommendations are to continue same teaching approaches used.  
Improve scheduling of activities.

INSTITUTIONS FOR NEGLECTED AND DELINQUENT CHILDREN:  
ST. VINCENT'S RESIDENCE  
(Summer Component)

GOALS SET:

1. Reinforcement and Instruction in Basic Skills In Reading.
2. Reinforcement and Instruction in Basic Skills in Language Arts.
3. Individualized instruction in Spelling, Handwriting, Typing, with functional use of each subject.
4. Practice in use of composition and creative writing.
5. Increase in interest in Reading.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

1. Pleasure Reading
2. Reading for a Purpose
3. Research Projects
4. Library Skills
5. Use of Dictionary and Encyclopedia
6. Reading with tapes
7. Film Viewing with tapes for listening
8. Programmed Material for Grammar reinforcement
9. Instructional Kits for continuous progress
10. Games for reinforcement and remedial drill
11. Varied instructional materials for individual needs

GOALS ATTAINED:

1. Reading level increased by 1 or 2 grades as per California test battery (50% average gain).

2. Language Arts level increased at about same rate.
3. Interest in Reading stimulated through individualized instruction.
4. Typing made functional in writing social letters and class reports.
5. Establishment of good reading habits seen by choice frequency of use and discussion of reading materials.

GOALS NOT ATTAINED:

For psychological reasons some girls were not able to apply themselves to the learning tasks. Hence, the progress was slow for them in all areas of instruction. Related subjects such as Art and Music were offered to them.

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

1. More cultural trips will be planned for instructional purposes on an extra curricular basis.
2. Tests will be given before and after the duration of the program to afford the full six weeks time for the program.



INSTITUTION FOR NEGLECTED AND DELINQUENT CHILDREN:  
SALVATION ARMY IVY HOUSE  
(Summer Component)

GOALS SET:

1. To increase the basic skills level of our children i.e., reading and math.
2. To increase the children's social and educational awareness of the city.
3. Cultural enrichment and activity program.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

1. Daily tutorial sessions in math and reading, each session lasted for one hour.
2. Trips to historical and educational sites throughout Philadelphia and its surrounding areas.
3. Various activity programs utilized to release tension and increase interest in the program.

GOALS ATTAINED:

1. According to pre and post tests to date, many of the children have improved their basic skills level.
2. Writing samples have been taken after the majority of educational trips to support their increase of knowledge gained by taking the trip.

GOALS NOT ATTAINED:

All goals were attained.

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

1. Continue structured summer basic skills improvement program.
2. Encourage the children to read as much as possible; one way to do this is to offer an incentive program.
3. Widen the activity program to make the total program more attractive.

INSTITUTIONS FOR NEGLECTED AND DELINQUENT CHILDREN:  
SOUTHERN HOME FOR CHILDREN  
(Summer Component)

GOALS SET:

1. Youngsters will build upon their basic skills in computational mathematics.
2. Youngsters will increase their interest and build upon their reading vocabulary.
3. Youngsters will have a positive and successful learning experience.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

Children worked in groups of 7 in both reading and mathematics for 8 hour daily sessions. The neediest youngsters were selected for additional educational tutoring.

GOALS ATTAINED:

1. Many youngsters were able to increase their knowledge in at least one basic math operation.
2. Youngsters increased their reading and writing vocabulary.
3. Youngsters enjoyed and were successful in a learning situation.

Goals were evaluated through standardized tests, teacher operation and class work. Attendance for the summer program was excellent.

GOALS NOT ATTAINED:

All goals were attained.

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

Individual tutoring in addition to group work.

INSTITUTIONS FOR NEGLECTED AND DELINQUENT CHILDREN:  
STENTON CHILD CENTER  
(Summer Component)

GOALS SET:

1. To improve, significantly, the knowledge, skills and abilities of all the children who have demonstrated educational deficiencies ranging from moderate to severe, especially in the areas of mathematics and reading.
2. To encourage and motivate a more positive attitude in all the children in the program toward self, school and desire/ability to learn.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

1. Prescribed a minimum of one hour of concentration on reading and one hour of mathematics per pupil, per week.
2. Prescribed rote drills to develop/improve number skills, vocabulary skills, spelling and phonics.
3. Prescribed silent and oral reading exercises using standard reading texts.
4. Prescribed activities/games that fostered and expanded learning abilities and comprehension - i.e., oral language, reciting aloud, writing, mathematical exercises involving experimentation with combinations/relationships of objects that required the use of addition, subtraction, division, etc., and time measurement problems.

GOALS ATTAINED:

1. At least 60% of the participating children advanced one level in mathematics as measured by the Philadelphia Mathematics Evaluation Test administered at the start and end of the program.
2. Approximately 70% of the participating children demonstrated significantly and overtly a more positive attitude towards school/education, and a stronger desire to want to improve their individual basic skills. This area of accomplishment is attributed primarily to the manner in which the program was conducted - the classroom atmosphere was relaxed, friendly, interesting and non-threatening.

Receiving instructions on a one-to-one basis, or in small groups of three or four, helped ease feelings of hopelessness and inadequacy resulting in a more gradual, consistent and concomitant effort to improve self-image.

GOALS NOT ATTAINED:

Approximately 40% of the pupils failed to show any significant improvement in reading skills, mathematical skills or motivation towards self and/or school. Reason(s): unwillingness to participate in the daily classroom activities, rigidity in low self-esteem, negative attitude toward school in general.

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

1. Increase/intensify the guided educational activities phase of the program.
2. Increase the arts/crafts work aspects of the program.
3. Implement more role-playing in the conduct of the program in order to engender/promote more active participation, interest and achievement.
4. Make program less structural and increase those cultural, social and recreational activities that relate and give impetus to improving basic educational skills.



INSTITUTIONS FOR NEGLECTED AND DELINQUENT CHILDREN:  
YOUTH DEVELOPMENT CENTER  
(Summer Component)

GOALS SET:

1. To improve the reading skills of students reading below the fourth grade level.
2. To improve the mathematics skills of students performing below the fourth grade level.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

Students were tutored individually and in small groups.

GOALS ATTAINED:

Tests indicate that students who attended regularly improved their reading and math skills.

GOALS NOT ATTAINED:

None

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

None

INSTITUTIONS FOR NEGLECTED AND DELINQUENT CHILDREN:  
YOUTH SERVICE INCORPORATED  
(Summer Component)

GOALS SET:

1. To provide a summer program rich in cultural, arts & crafts, fun filled trips and activities.
2. To provide a varied schedule to meet the needs of the youngsters.
3. To provide a tutorial program to improve their basic reading skills.
4. To encourage the writing and printing of a summer newsletter by the youngsters.
5. To expose the youngsters to various musical art forms via the Dell concerts and Temple Music Festival.
6. To have youngsters participate in planned physical activities.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

1. Youngsters received remedial and developmental reading instructions for three hours per week for seven weeks.
2. Youngsters attended seven Dell concerts to hear nationally renowned artists (Ramsey Lewis, Arthur Prysock, Roberta Flack, Count Basie, Lionel Hampton)
3. Youngsters wrote and published several newsletters describing various components of summer activities and their reactions both negative and positive.
4. Youngsters engaged in Arts & Crafts, produced five finished products using several different types of material.
5. Youngsters participated in swimming program once a week at the Cobbs Creek Recreation Center where swimming lessons were given by qualified instructors.
6. Youngsters were taken to the Black History Museum, Bulletin Bldg., Franklin Mint, where guided tours were provided by competent guides.
7. Youngsters were given weekly picnics and outings to French Creek, Valley Forge, Atlantic City, Parvine State Park, Wildwood, Dorney Park.
8. Youngsters held a Bazaar and Dance to culminate the summer program.

#### GOALS ATTAINED:

All of the goals stated in section two were attained. The best indication of the success of the summer program is best measured by the fine attendance of the youngsters. Many of our youngsters usually find meaningful summer employment; however, due to severe shortages in government funding, most of the young people were unable to be placed in job situations. The summer program was able to fill a much needed void. It provided the youngsters with an opportunity to improve sorely needed skills in reading, and at the same time, enjoy a summer of fun, physical and cultural development.

#### GOALS NOT ATTAINED:

Our program could have included more varied activities had additional funding been available.

#### CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

It is my feeling that the program was smoothly and efficiently run. With additional funding, next year's program could be broader in scope and include a richer offering.

LEARNING CENTERS  
(Summer Component)

GOALS SET:

1. To continue the development of teacher and parent reproducible learning sequences (with concrete components).
2. To evaluate, refine, alter or discard teaching aids.
3. To research newest commercial idea collection for additions to our T.C. offerings.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

1. Teacher Center Shop completely reorganized and labeled for better self-help by teachers and parents and to assist them in clean up.
2. New learning aids designed and models made
3. Worn-out materials repaired, redesigned or replaced

GOALS ATTAINED:

Goals 1 and 2 were met with deliberate emphasis on the shop part of the Learning Centers Project, since we concentrated on the non-shop part in past summers.

Goals 1 and 2 were met by the director through editing Teacher Center produced written learning sequences to be used in 1977-78.

GOALS NOT ATTAINED:

Goal 3 was only partly met because of 1) lay-off of the Project's Administrative Officer for which a replacement was secured, 2) paralysis of the school system in dealing with administrative matters due to budget crisis and resulting uncertainties in matters dealing with personnel for the next school year.

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

Goals set were realistic and achievable in a normal summer.



MOTIVATION  
(Summer Component)

GOALS SET:

To modify the project fiscally and programmatically in preparation for the 1977-78 school year.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

1. Secretarial - printing of project material.
2. Researching results of goal achievement.
3. Bringing fiscal coordination to all school projects.
4. Arranging for fiscal order for new year.

GOALS ATTAINED:

All goals were attained. Materials for the new term were prepared.

GOALS NOT ATTAINED:

All achieved.

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

Another secretary is of utmost necessity. One person was displaced because of budget problems.

MULTIMEDIA CENTER  
(Summer Component)

GOALS SET:

To insure the efficient operation of the Multi-Media Center for the 1977-78 school year in providing audiovisual materials to educationally deprived children.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

1. Accessioning new materials.
2. Updating the Multi-Media Center catalog.
3. Maintaining and repairing equipment and audiovisual software.
4. Preparing delivery schedules.
5. Preparing systems for circulation of materials.
6. Compilation of statistical data on usage of the Center's materials.
7. Relocating the entire collection and activity from 2901 W. Allegheny Avenue to 5th and Luzerne Streets.

GOALS ATTAINED:

The goal cited above has been attained. A work list was composed by the project coordinator and all tasks were completed under her personal supervision.

GOALS NOT ATTAINED:

None

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

None

SCHOOL-COMMUNITY COORDINATOR  
(Summer Component)

GOALS SET:

The administrative staff of the project will study the development of the project for the past year. They will also review the records kept by personnel. They will plan new procedures and strategies based upon their findings.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

The records were reviewed by the administrative staff. Conferences were held with the monitoring and evaluation team of Dr. Escourt and Mrs. Waters from the Office of Research and Evaluation. Statistical data was reviewed in these conferences. Conferences were held with Labor Relations' Director, Mr. George Branch.

GOALS ATTAINED:

All of the goals were attained. New forms and procedures will be implemented to increase accuracy and punctuality in the submitted records by the School-Community Coordinator. However, a new emphasis for the Area Coordinator will add a dimension in their assisting the School-Community Coordinator in their overall performance. This will be accomplished by having Area Coordinators review weekly tallies.

GOALS NOT ATTAINED:

None

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

Programmatic Changes:

1. Emphasize three basic objectives getting first priority.
2. Establish a weekly tally (see enclosed) this helps the School-Community Coordinator to plan and account for their work over a shorter time-span of a week instead of the month.
3. Area Coordinators will collect weekly tallies using them as a basis for program planning and more efficient use of the School-Community Coordinator's time.
4. Area Coordinator will collect the monthly reports from the School-Community Coordinators (previously they were sent directly to Central Office), examine them, review them in conference and then forward them to the Central Office.

Recommendations:

1. Establish 4 out-of-school visits per working day instead of 3½ - cutting a person or an agency can be confusing.
2. Stress maximum output, minimum figures have been interpreted by the School-Community Coordinators as being the target instead of the most acceptable number.
3. Increase and project the skills of all Bilingual School-Community Coordinators to the degree that one (1) person can service a school. The result could be a broadening of our service area to include other schools that are eligible and that do not require a school-community coordinator. This would free seven (7) School-Community Coordinators.



APPENDIX

PROJECT ADMINISTRATORS AND EVALUATORS

# PROJECT ADMINISTRATORS AND EVALUATORS

| EVALUATION TEAM                                                                                                                                                                                                                       | PROJECT                                                                                                                                                                                     | ADMINISTRATOR                                                                                                                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <u>Team Leader: Thomas J. Clark</u><br>Thomas J. Clark<br>Thomas J. Clark<br>Thomas J. Clark, Ethel K. Goldberg<br>William F. Haggett<br>277 Thomas J. Clark, Ethel K. Goldberg, Stuart Hoffman<br>Thomas J. Clark, Ethel K. Goldberg | Computer-Managed Instruction<br>Learning Centers<br>Primary Reading Skills Center<br>Multimedia Center<br>Aide Services<br>Reading Improvement Through Teacher Education                    | Sylvia Charp<br>Lore Rasmussen<br>Charles McLaughlin<br>Charles McLaughlin<br>Frances Becker<br>Leontine Scott<br>Charles McLaughlin<br>Charles McLaughlin |
| <u>Team Leader: Arnold Escourt</u><br>Arnold Escourt<br>Arnold Escourt, Fleta B. Waters<br>Carrolyn K. Iwamoto<br>Arnold Escourt, Fleta B. Waters<br>Carrolyn K. Iwamoto<br>Fleta B. Waters                                           | Benchmark<br>Improvement of Reading Skills "A"<br>Comprehensive Mathematics<br>Improvement of Reading Skills "C"<br>Elementary Mathematics Classroom Aides<br>School Community Coordinators | Edmund J. Forte<br>Marjorie Farmer<br>Alexander Tobin<br>Charles McLaughlin<br>Alexander Tobin<br>George Green                                             |
| 249                                                                                                                                                                                                                                   |                                                                                                                                                                                             | 250                                                                                                                                                        |

PROJECT ADMINISTRATORS AND EVALUATORS (Continued)

| EVALUATION TEAM                                                           | PROJECT                                            | ADMINISTRATOR        |
|---------------------------------------------------------------------------|----------------------------------------------------|----------------------|
| Joseph Meade                                                              | Motivation                                         | Rebecca Segal        |
| Team Leader: <u>Marion Kaplan</u>                                         |                                                    |                      |
| Marion Kaplan, Vivian Price                                               | Bilingual Education                                | Charles McLaughlin   |
| Marion Kaplan, Vivian Price                                               | English as a Second Language-Readiness             | Charles McLaughlin   |
| Marion Kaplan, Vivian Price                                               | Summer Special Education                           | Winifred L. Tillery  |
| Marion Kaplan, Vivian Price                                               | Counseling Services                                | Albert Bell          |
| Team Leader: <u>William Loue</u>                                          |                                                    |                      |
| William Loue                                                              | Individualized Education Center                    | Charles McLaughlin   |
| William Loue, Lisbeth R. Sklar*                                           | Education in World Affairs                         | Margaret Lonsetta    |
| Judith Green                                                              | Institutions for Neglected and Delinquent Children | Lurlene Sweeting     |
| William Loue, Judith Green                                                | Affective Education                                | Norman Newberg       |
| Thomas McNamara, Judith Goodwin, Anne Lukshus, Janice Atkins, James Welsh | Follow Through (ESEA Title I Component)            | Leontine Scott       |
| Team Leader: <u>Robert Offenberg</u>                                      |                                                    |                      |
| Robert Offenberg, Bob Epstein, Carlos Rodriguez-Acosta                    | English to Speakers of Other Languages             | Eleanor L. Sandstrom |
| 251                                                                       |                                                    | 252                  |

# PROJECT ADMINISTRATORS AND EVALUATORS (Continued)

| EVALUATION TEAM                                                                                                                                                                                                                           | PROJECT                                                                                                                                                                        | ADMINISTRATOR                                                                                                                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| <u>Team Leader: Robert G. Reiter</u><br>Robert G. Reiter<br>Robert G. Reiter<br>Robert G. Reiter, Joseph Meade<br>Robert G. Reiter                                                                                                        | Operation Individual<br>Multimedia Center<br>Summer Reading Readiness<br>Parent Aides                                                                                          | Charles McLaughlin<br>Charles McLaughlin<br>Charles McLaughlin<br>Charles McLaughlin                                                                   |
| 279 Mark J. Raivetz                                                                                                                                                                                                                       | Intensive Reading for Secondary Students                                                                                                                                       | Philip Pitis                                                                                                                                           |
| Roger J. Fishman,<br>Joseph Wroblewski<br>Joseph Gavin<br>Sharon Rose, Judith Zernik<br>Sharon Rose, Kenneth Booth<br>James Scheib, James Comerford<br>James Scheib,<br>Brenda Cohen Snyder<br>Alan Solomon, Jay Rosemoff<br>Alan Solomon | Alternative Programs<br>District 6 Reading<br>District 1 Reading<br>District 4 Reading<br>District 2 Reading<br>District 3 Reading<br>District 5 Reading<br>District 7 Reading | Lorraine Brown<br>Norman Kline<br>Verneta Harvey<br>Katherine C. Jackson<br>Michael Iannelli<br>Arthur N. Romanelli<br>Irving Rosen<br>Reeda Kravinsky |

\*Projects generally were assigned to evaluation teams under the leadership of research associates. an asterisk following a person's name indicates that major responsibility within the team was assigned to that person.